# PRINT ROLLING

# Operator's Guide



The Printronix L5535 Multifunction Printer

### **Consumables Information**

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For the name of your nearest Printronix full service distributor, call:

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| Consumable Item    | Part Number | Replacement Interval<br>(in Pages) <sup>1</sup> |
|--------------------|-------------|---|
| Toner cartridge    | 703532-001  | 21,000  |
| Waste toner bottle | 202984-001  | 150,000   |
| Photoreceptor drum | 703535-001  | 150 - 300,000<br>See Note 2                     |
| Developer          | 703548-001  | 150,000   |
| Developing Unit    | 705739-001  | 600,000   |

Note 1: Varies with paper size, media type, and toner coverage. Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner of print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

For more information, please go to our website at **www.printronix.com**.

L5535 Multifunction Printer
Operator's Guide

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# **Table of Contents**

| 1 | Introduction                                 | 17      |
|---|--|---------|
|   | About This Manual                            | 17      |
|   | General Safety Precautions                   | 18      |
|   | Safety Label And Component Locations         | 20      |
|   | About The Printer                            | 25      |
|   | Features                                     | 25      |
|   | Emulations                                   | 25      |
|   | Fonts And Forms                              | 26      |
| 2 | Operation                                    | 27      |
|   | Installation Overview                        | 27      |
|   | Loading Paper                                | 28      |
|   | Loading Fanfold Paper                        | 28      |
|   | Loading Cut Sheet Paper (Option)             | 31      |
|   | Changing Cassette Paper Size (Optional Proce | dure)34 |
|   | Cut Sheet Tray Linking (Optional Procedure)  | 35      |
|   | Custom Tray Width (Optional Procedure)       | 36      |
|   | Custom Tray Length (Optional Procedure)      | 37      |
|   | Powering On The Printer                      | 38      |
|   | Printer Functions                            | 38      |
|   | Power Paper Stacker (Option)                 | 39      |
|   | Physical Description                         | 40      |
|   | Stacker Operation Keys                       | 41      |
|   | Setting The Stacker Page Length              | 42      |
|   | Removing Paper                               | 43      |
|   | Stacker Full                                 |         |
|   | Using The Control Panel                      |         |
|   | Liquid Crystal Display (LCD)                 | 45      |
|   | Function Keys                                | 47      |

### **Table of Contents**

| 3 | Consumables Replacement                    | 51  |
|---|--|-----|
|   | Consumables Replacement                    | 51  |
|   | Replacement Intervals                      |     |
|   | Replacing The Toner Cartridge              | 52  |
|   | Replacing The Waste Toner Bottle           | 57  |
|   | Replacing The Photoreceptor Drum           | 60  |
|   | Proper Disposal Of A Drum Unit             | 68  |
|   | Replacing The Developer                    | 69  |
|   | Developing Unit Removal                    | 70  |
|   | Removing Old Developer                     | 70  |
|   | Adding New Developer                       | 72  |
|   | Replacing The Developing Unit              | 73  |
|   | Developing Unit Removal                    | 73  |
|   | Developing Unit Installation               | 75  |
| 4 | Scheduled Maintenance                      | 77  |
|   | Maintaining Print Quality                  | 77  |
|   | Maintenance Tools                          | 78  |
|   | Service Level Page Counts                  | 79  |
|   | Clearing Service Level Messages            | 80  |
|   | Maintenance Schedules                      | 81  |
|   | User Cleaning Schedule                     | 81  |
|   | General Cleaning                           | 95  |
|   | Vacuuming The Printer                      | 95  |
|   | Cleaning The Chargers                      | 104 |
|   | Main Charger                               | 104 |
|   | Precharger and Transfer/Separator Charger. | 108 |
|   | Cleaning The Fuser Unit Cover Glass        | 110 |
|   | Cleaning The Cut Sheet Option Rollers      | 115 |
|   | Pickup Rollers                             | 115 |
|   | Reverse Rollers                            | 118 |
|   | Major Cleaning                             | 121 |
|   | Cleaning Unit                              | 121 |

### **Table of Contents**

| Photoreceptor Drum   | 126129129129130130                       |
|--|--|
| Troubleshooting  Troubleshooting  Diagnostics  Offline Diagnostics  Online Diagnostics  Fanfold Paper Jams  Paper Jam Near The Tractor | 129<br>129<br>129<br>130<br>130          |
| Troubleshooting  Diagnostics  Offline Diagnostics  Online Diagnostics  Fanfold Paper Jams  Paper Jam Near The Tractor                  | 129<br>129<br>130<br>130                 |
| Diagnostics  Offline Diagnostics  Online Diagnostics  Fanfold Paper Jams  Paper Jam Near The Tractor                                   | 129<br>129<br>130<br>130                 |
| Offline Diagnostics Online Diagnostics Fanfold Paper Jams Paper Jam Near The Tractor   | 129<br>130<br>130                        |
| Online Diagnostics  Fanfold Paper Jams  Paper Jam Near The Tractor   | 130<br>130<br>130                        |
| Fanfold Paper Jams  Paper Jam Near The Tractor   | 130<br>130                               |
| Paper Jam Near The Tractor   | 130                                      |
|  |  |
| Paper Jam Near The Paper Output Section  | 122                                      |
|  | 132                                      |
| Cut Sheet Paper Jams   | 138                                      |
| Paper Jam At The Back Of The Paper Cassette  | 138                                      |
| Paper Jam In The Transport Input Section   | 140                                      |
| Paper Jam In The Transport Output Section  | 144                                      |
| Paper Jam In The Face Up Or Down Paper Path.   | 145                                      |
| System Status and Error Messages   | 146                                      |
| Reprinting Pages After Fault Condition   | 146                                      |
| Error Messages   | 151                                      |
| Maintenance Log Sheets   | 159                                      |
| Maintenance Log Sheets   | 159                                      |
| Specifications   | 163                                      |
| Paper Specifications   | 163                                      |
| Performance Characteristics  | 166                                      |
| Host Interfaces  | 167                                      |
| Emulations   | 168                                      |
| Memory Requirements  | 168                                      |
| Safety Regulations   | 168                                      |
| Electromagnetic Interference   | 168                                      |
| Physical Characteristics and Environment   | 169                                      |
|  | Paper Jam In The Transport Input Section |

| Table of Contents |
|-------------------|
|-------------------|

# 1

### Introduction

### **About This Manual**

This manual explains how to use your printer.

### **Safety Notices And Special Information**

For your safety and to protect valuable equipment, it is very important that you read and comply with all information highlighted under the following special headings:

### **WARNING**

A warning notice calls attention to a condition that could harm you.

### **WARNUNG**

Ein Warhinweis dieser Art weist auf Verletzungsgefahr hin.

### **AVISO**

Las notas de adviso llaman la atención sobre una condición que puede causar lesiones.

### **ATTENTION**

Attire votre attention sur une opération pouvant présenter un danger.

### **AVVERTENZA**

Un'indicazione di avvertenza segnala una condizione di pericolo suscttibile causare lesioni all'operatore.

### **CAUTION**

A caution notice calls attention to a condition that could damage the printer.

### **General Safety Precautions**

### **IMPORTANT**

An important notice provides information that is vital to proper operation of the printer.

**NOTE:** A note provides information and helpful tips about printer operation.

### **Keys And Display Messages**

Keys and indicators that are labeled on the printer are printed in uppercase letters. For example:

Press ENTER to select the value shown on the LCD.

Messages that appear on the control panel message display (called the Liquid Crystal Display, or LCD), are printed in uppercase letters and enclosed in quotation marks. For example:

"ENTER SWITCH LOCKED" appears on the LCD.

### **General Safety Precautions**

Observe the following precautions at all times to ensure safe operation of the printer.

Read all instructions and save them for future use.

Follow all safety notices and instructions printed in this manual and marked on the printer.

The operator-accessible power switch does not shut off all power to the printer. You must unplug the power cord to shut off all power to the printer.

The printer relies on protective devices in the building installation for protection. The printer must be connected to a 30 Amp, 250 V outlet.

Do not operate the printer in a room which is not properly ventilated. It is recommended that the room be at least 1,000 cubic feet with one air exchange every two hours.

Remove packaging materials carefully and save for possible future use. If the printer is powered on without removing all internal tape and packing, the printer may be damaged.

Keep combustible materials away from the printer. Dispose of used toner properly, as it is flammable.

Keep away from components in the printer that are potentially hazardous or easily damaged. For example, the fuser unit becomes very hot under normal operating conditions, and several components use high voltage.

Do not block or obstruct any cabinet ventilation slots.

Never spill liquid on the printer. Use only approved cleaning agents and methods.

Put nothing on the power cord. Do not locate the power cord where people will walk on it. Do not place the power cord under any carpet.

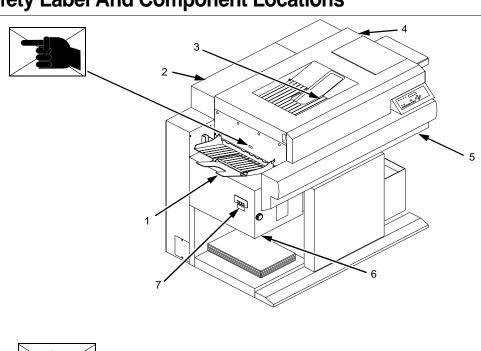
Do not lean on or put heavy objects on top of the printer.

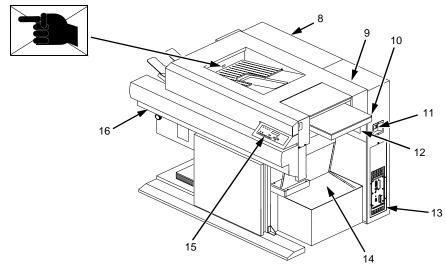
Do not put your hand into the power paper stacker when the printer is in operation.

Turn off the power immediately if the printer emits an unusual noise or smell.

Do not look directly at the flash lamp light.

## **Safety Label And Component Locations**



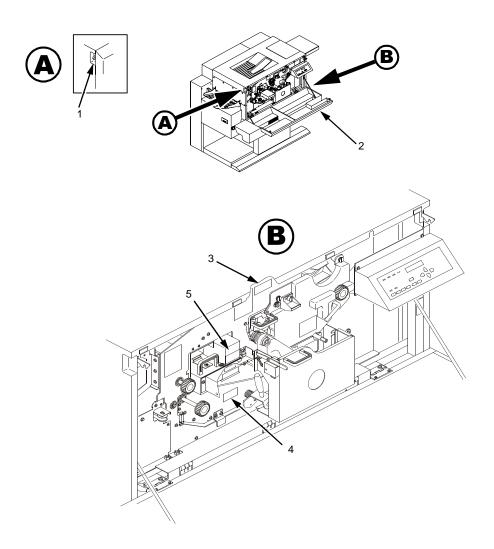


- Face Up Paper Output Tray
   Rear Cover
   Face Down Paper Output Tray
   Top Cover

- Front Upper Cover
  Power Paper Stacker (Optional)
  CAUTION 6) 7)
- 8) Rear Cover 9) Top Cover
- 10) Cut Sheet Paper Input Cassette (Optional)
  11) Power Switch
  12) CAUTION

- 13) Host I/O Connections14) Fanfold Paper15) Control Panel16) Front Upper Cover

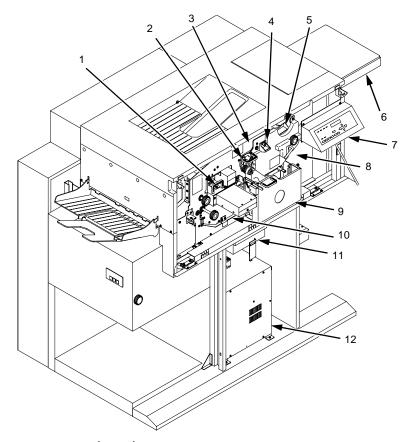
Figure 1: Safety Labels and Components



- Open/Close Button Front Upper Cover CAUTION CAUTION WARNING

- 2) 3) 4) 5)

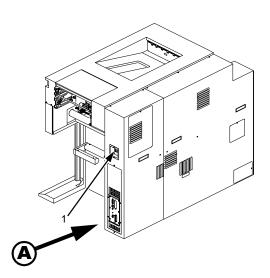
Figure 2: Front View with Front Upper Cover Open

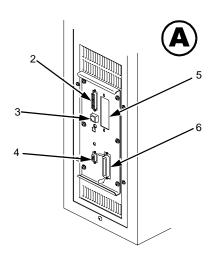


- 1) Fuser Unit
  2) Cleaning Unit
  3) Discharge LED (not visible)
  4) Main Charger
  5) Toner Cartridge
  6) Optional Cut Sheet Paper Input Cassette
  7) Control Panel
  8) Developing Unit
  9) Waste Toner Recovery Unit
  10) Transport Unit
  11) Smoke Filter Box

- 11) Smoke Filter Box12) Power Supply for Flash Lamp

Figure 3. Front View with Front Upper Cover Removed





- 1) 2) 3) 4) 5) 6)

Power Switch
Serial Port
Diagnostic Port
General Purpose I/O Port
Optional Coax/Twinax Port
Parallel Port/Optional Ethernet Port

Figure 4: Rear Cover

### **About The Printer**

### **Features**

Printing speed is 35 pages per minute on continuous letter size and A4 size fanfold forms (long edge fed). In the optional cut sheet mode, printing speed is 27 pages per minute on letter size and A4 size cut sheet forms (long edge fed). The printer produces printed output with a 300 x 300, (or optionally) 240 x 240 or 400 x 400 dotsper-inch (dpi) resolution in either the continuous form or cut sheet printing mode. See Appendix B for printer specifications.

Features include the following:

- Continuous fanfold paper and optional cut sheet forms handling
- User-replaceable toner cartridge
- DuraFusion<sup>®</sup> flash fusion technology
- Liquid crystal display that provides operating and error messages
- Flash memory which stores emulations
- Non Volatile memory which stores preset configurations
- Serial and parallel interfaces
- Ethernet<sup>™</sup> network adaptor (optional)
- Coax/Twinax interfaces (optional)
- Power stacker (optional)

### **Emulations**

Your printer comes equipped with the Printronix<sup>®</sup> LinePrinter Plus<sup>®</sup> emulation software (which emulates an impact printer). Printronix LinePrinter Plus includes the following printer protocols:

- P-Series
- P-Series XQ
- Serial Matrix

### Chapter 1

### **About The Printer**

- Proprinter<sup>®</sup> III XL
- Epson<sup>®</sup> FX-1050

Printronix LinePrinter Plus provides portrait and landscape image orientation. Automatic 1-up, 2-up, 4-up, and gray bar overprinting are also provided. The emulation also offers optional proportional (scalable) fonts.

The following optional emulations are also available:

- IGP<sup>®</sup>/PGL<sup>®</sup>
- IGP/VGL
- PCL5<sup>®</sup>
- IPDS™

For specific information on each emulation, see the appropriate emulation manual.

### **Fonts And Forms**

The printer provides a variety of resident fonts. The emulation you are using determines what resident fonts are available. For example, the LinePrinter Plus emulation provides CG Times, Letter Gothic, Courier, OCR-A, and OCR-B as standard sets of fonts.

With either the LinePrinter Plus or PCL 5 emulations, you can load additional fonts into printer memory from the host computer. The additional fonts can be loaded into the printer memory using the download procedure or using host commands. The additional fonts can be loaded into RAM or Flash memory. If the additional fonts are loaded into RAM, they will be lost when the printer is reset or powered off. Additional fonts are accessed by host commands.

You can store forms together with fonts. The storage space for forms and fonts depends upon the amount of printer memory and/ or non-volatile Flash memory space available. You can manipulate different fonts and/or forms depending upon the emulation installed.

# 2 Operation

### **Installation Overview**

The installation and setup of your printer is intended to be done by a service provider who has been trained and authorized by Printronix. Your service provider is also responsible for doing a preinstallation site survey, unpacking the printer, connecting the power and host data cables, and installing the first set of consumable items in the printer. Depending on the terms of your service contract, your service provider might also power on your printer and configure it. As the owner of the printer, it is your responsibility to provide adequate ventilation and power for the printer.

### **Loading Paper**

The following section explains how to load fanfold paper. To load cut sheet paper, go to page 31.

### **Loading Fanfold Paper**

### **IMPORTANT**

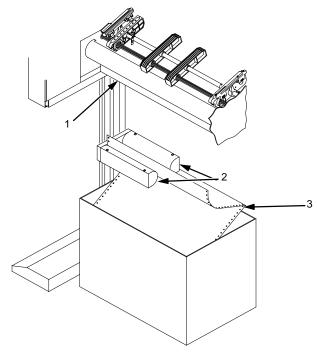
When loading fanfold paper, be sure the leading edge of the paper has a clean, separated perforation (without ragged edges or paper chaff).

**NOTE:** If you leave the printer on and replace paper, it will resume printing where it left off when you put it online.

To load fanfold paper, perform the following steps. Repeat this procedure whenever top-of-form must be reset (e.g., after clearing a paper jam, loading new paper, etc.). For details on clearing paper jams, refer to Chapter 5, "Troubleshooting."

- If your printer has the optional power paper stacker installed, set the stacker page length adjustment on the side of the power stacker to match the paper length to be used.
- 2. Place the fanfold paper box under the tractor unit.

3. Pass the leading edge of the paper between the lower paper guides, as shown in the illustration below.



### Legend:

- 1) Tractor Unit
- 2) Lower Paper Guides
- 3) First paper fold is toward printer.

### **IMPORTANT**

To prevent jams, place the first fold of the paper facing toward the printer as shown.

- 4. Unlock only the right tractor by pushing forward on the tractor lock.
- 5. Open the left and right tractor gates and place the paper about half-way onto the tractor pins.

### **IMPORTANT**

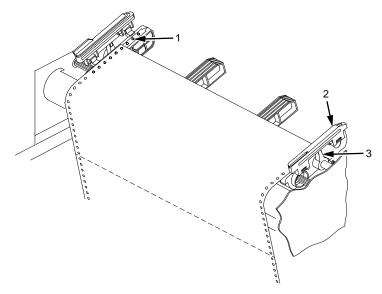
Do not push the paper past the tractors into the area of the paper jam sensor.

6. Close the left tractor gate.

7. Move the right tractor to the left or right until its pins line up with the holes in the right edge of the paper, then close the right tractor gate.

NOTE: When you place the paper on the tractors, you should introduce a slight amount of side-to-side tension into the paper. The right tractor must be set far enough to the right so that there are no wrinkles, looseness, etc. in the paper. Be careful not to set the right tractor too far to the right, however, as too much tension may cause the paper holes to tear away from the tractor pins.

- 8. Lock the right tractor with the tractor lock.
- 9. If you are reloading paper following a "FAN-FOLD PAPER EMPTY" message with the printer power on, press ONLINE to place the printer online. The printer automatically sets the physical top of form at the leading edge of the paper and resumes printing.



- 1) Tractor Pins
- 2) Tractor Gate
- 3) Tractor Lock

### **Loading Cut Sheet Paper (Option)**

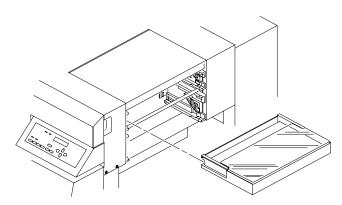
If your printer is equipped with the cut sheet paper feed option, then upper and lower paper input cassettes are provided. When printing on cut sheet paper, you can select either of two paper output trays: the face down tray (default) or the face up tray.

To change the paper output tray selection, see the Cut Sheet Output option on the Paper Control menu. Refer to the *User's Manual* for details.

**NOTE:** If the printer runs out of paper during printing, you do not need to turn off power to the printer to replace paper. If power is maintained to the printer, when you replace the paper and place the printer online, it will resume printing automatically where it left off.

To load cut sheet paper, perform the following steps:

1. Pull out the desired paper cassette and remove its cover.

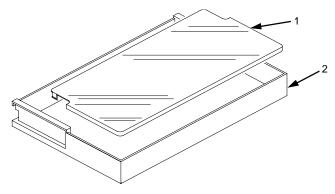


### Chapter 2

### **Loading Paper**

2. Load the new paper uniformly in the cassette, making sure the leading edge of the paper is at the front of the cassette. Do not load more paper than specified below, otherwise a paper jam may occur.

| 17-20 lb.<br>bond | Upper<br>cassette<br>Lower<br>cassette | 250 sheets or less<br>500 sheets or less                           |
|-------------------|--|--|
| 21-44 lb.<br>bond | Upper cassette Lower cassette          | 1 inch or less in<br>thickness<br>2 inches or less in<br>thickness |



- Cassette Cover
   Cassette
- 3. Cover the cassette and insert it fully into the printer, making sure it is completely seated. If the cassette is not fully seated, a paper jam may result.

4. If you are reloading paper following a "CUT-SHEET PAPER EMPTY" message with the printer power on, press ONLINE to place the printer online. The printer resumes printing.

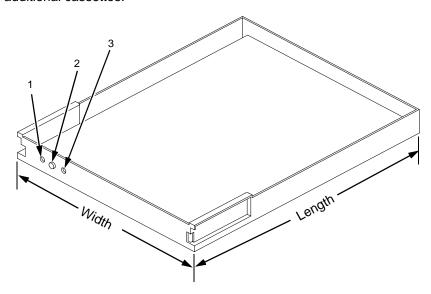
**NOTE:** Occasionally, paper may become moist and wavy, resulting in poor print quality. If this occurs, remove the wavy sheets of paper from the cassette and replace them with those from a new package.

In order to minimize the possibility of a paper jam:

- Only use xerographic quality paper.
- Load paper in a cassette which has been adjusted for the exact paper size. (To set the cassette for the paper size, see page 34.)
- Do not gather loose paper for use.
- Do not use wrinkled, folded, or moist paper.
- Do not leave paper in the cassettes overnight.
- Always store unused paper in a clean, dry area protected from sunlight.
- If a paper package is opened but not fully used, rewrap and seal the package and store it properly for future use.

# **Changing Cassette Paper Size (Optional Procedure)**

The cut sheet option comes with four cassettes (paper trays) preconfigured for either U.S. or Metric paper sizes. Should the configurations of these cassettes not meet your needs, you can reconfigure the cassettes as described below, or you can purchase additional cassettes.



IPS 10, 11, and 12 = Upper level paper size detector sensors IPS 20, 21, and 22 = Lower level paper size detector sensors

### Legend:

- 1) IPS (Paper Size Insert) 12/22
- 2) IPS 11/21
- s) IPS 10/20

There are three holes in the forward end of the cut sheet paper feed cassettes. Plastic inserts are to be set in these holes according to the size of the cut sheet paper loaded in the cassette (as shown in the table that follows).

### **Cut Sheet Tray Linking (Optional Procedure)**

When the plastic inserts in the cassette contact the paper size sensors on the printer, the printer determines that the paper cassette is in position and identifies the paper size.

The following table lists the available standard settings for the cut sheet paper feed cassette (O = plastic insert; --- = no insert):

| Paper size  | IPS 12/22 | IPS 11/21 | IPS 10/20 |
|---|-----------|-----------|-----------|
| Legal   |           | 0         | 0         |
| Ledger  | 0         | 0         |           |
| A3  | 0         |           | 0         |
| B4  | 0         |           |           |
| Letter  |           | 0         |           |
| A4  |           |           | 0         |
| Custom Size   | 0         | 0         | 0         |
| (variable width - 7.0 - 12.0 inches)<br>(variable length - 8.3 - 19.6 inches) |           |           |           |

### **Cut Sheet Tray Linking (Optional Procedure)**

If your printer is equipped with the cut sheet paper feed option, you can use Tray Linking. Tray Linking is disabled by default. With Tray Linking enabled, when the active cut sheet paper tray runs out of paper, the printer will automatically switch to the other paper tray and continue printing.

To enable or disable this feature, see the Tray Linking option on the Paper Control menu. Refer to the *User's Manual* for details.

**NOTE:** We recommend that you disable Tray Linking if the two cut sheet paper trays are of different sizes.

### Chapter 2

### **Loading Paper**

If the cut sheet trays are of different sizes, and Tray Linking is enabled, the printer will not switch to the alternate tray when the first tray runs out of paper, nor will it display the usual "CUT-SHEET PAPER EMPTY" message on the LCD. Instead, the printer stops printing and displays the message "TRAY MISMATCH."

To clear this message, either add paper to the active tray, or insert a matching tray in the alternate tray position. Then, press CLEAR on the control panel.

### **Custom Tray Width (Optional Procedure)**

If your printer is equipped with the cut sheet paper feed option, it is possible to override the standard cut sheet paper tray widths. This feature is called Custom Tray Width. The standard cut sheet paper tray sizes are listed in the table on page 35. Using Custom Tray Width and specially-modified paper trays, it is possible to use nonstandard paper stock that is wider or narrower than the standard paper widths. You can use nonstandard width paper either in the upper tray, in the lower tray, or in both trays.

If you are using the Custom Tray Width feature, you should adjust the width of the image in the printer to match your nonstandard width paper.

To set a custom tray width, see the Cust. Tray Width option on the Paper Control menu. Refer to the *User's Manual* for details.

**NOTE:** The Custom Tray Width feature requires specially-modified paper trays.

## **Custom Tray Length (Optional Procedure)**

If your printer is equipped with the cut sheet paper feed option, it is possible to override the standard cut sheet paper tray lengths. This feature is called Custom Tray Length. The standard cut sheet paper tray sizes are listed in the table on page 35. Using Custom Tray Length and specially modified paper trays, it is possible to use nonstandard paper stock that is longer or shorter than the standard paper length. You can use nonstandard length paper only in the lower tray.

If you are using the Custom Tray Length feature, use the control panel to adjust the length of the image in the printer to match your nonstandard length paper from the front panel.

To set a custom tray length, see Cut Sheet Options on the Paper Control menu.

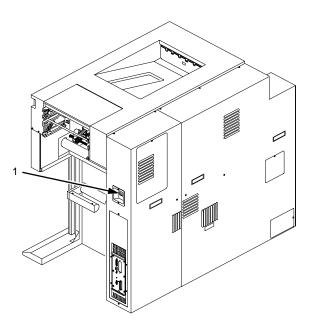
**NOTE:** The Custom Tray Length feature requires specially modified paper trays.

Variable Length feature is enabled when the Variable Tray Length is enabled, but the values are resumed after the lower tray has been reconfigured to standard paper size.

Paper selection has to be set to the lower tray with a custom tray inserted in order to make the variable tray length available through the control panel.

## **Powering On The Printer**

#### **Printer Functions**



#### Legend:

1) Power Switch

#### **CAUTION**

The printer must be connected to the proper power source: 200, 220, or 240 VAC and 50-60 Hz, as shown on the rear panel label. The DC power supply must be set for the proper line voltage. Using an incorrect power source or improperly setting the DC power supply will damage the printer.

- 1. Make sure the printer is plugged into the appropriate power source, the interface cable is connected, and the host computer is on.
- 2. Turn on the printer by setting the power switch to | (on).

- 3. Note that when you power on the printer, the following occur:
  - a. The printer reads the emulation and displays the message:

"TESTING HARDWARE

PLEASE WAIT..."

- b. If there are no bootup errors, the LCD displays "DIAGNOSTICS PASSED"
- c. The STAND BY Light flashes.

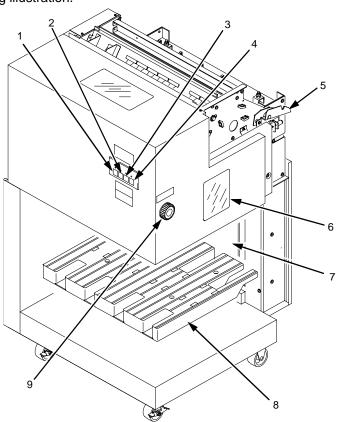
## **Power Paper Stacker (Option)**

#### **Safety Feature**

To prevent injuries, the optional power stacker is equipped with two safety stop bars located under the edge of the stacker (see following illustration). When the safety bars are pressed, stacker operation stops immediately. When the AUTO key is pressed, the stacker resumes operation.

## **Physical Description**

The front (output side) of the power stacker is shown in the following illustration.



- 2) 3) 4) 5) 6) 7) 8) 9)
- AUTO Key STOP Key DOWN Key HEAVY Key Hook
- Head/Tail Length Measuring Gauge (in inches)
  Safety Stop Bar (not visible in figure)
  Elevator Table

- Top/Bottom Adjustment Knob

## **Stacker Operation Keys**

The power paper stacker contains the following keys for operating the elevator:

- AUTO: Sets the elevator in automatic mode. Pressing this key causes the elevator table to rise until it reaches its maximum upper position and enables the stacker.
- STOP: Stops the elevator, and displays the message "STACKER NOT READY" on the printer control panel. The STOP key may be used to stop the elevator from lowering after pressing the DOWN key.
- DOWN: Lowers the elevator until it reaches its maximum lower position, or until the STOP key is pressed.
- HEAVY: ON equals "Heavy Mode" for thicker paper (LED is lit);
   OFF equals "Normal Mode" for thinner paper (LED is not lit).
   This key is only active in STOP mode and when there is no paper in the stacker.

When operating the power stacker in Heavy Mode, the maximum stack height *following a cut or page eject* depends on the page length, as shown in the following table:

| Page Length (inches) | Max. Stack Height (inches) |
|----------------------|----------------------------|
| 7.0                  | 7.5                        |
| 7.5                  | 7.2                        |
| 8.0                  | 7.0                        |
| 8.5                  | 6.6                        |
| 9.0                  | 6.4                        |
| 9.5                  | 6.1                        |
| 10.0                 | 5.8                        |
| 10.5                 | 5.5                        |

41

#### Chapter 2

#### **Setting The Stacker Page Length**

| 11.0 | 5.3 |
|------|-----|
| 11.5 | 5.0 |
| 12.0 | 4.8 |

**NOTE:** Normal Mode supports up to 28 lb. bond (105 g/m<sup>2</sup>). Heavy Mode must be used for media weights greater than 34 lb. bond (128 g/m<sup>2</sup>). Some media that are 28 lb. bond (105 g/m<sup>2</sup>) and higher require Heavy Mode for reliable stacking.

## **Setting The Stacker Page Length**

Set the stacker page length to match the actual page length. On the side of the stacker, locate the adjustment knob and the window containing a measuring gauge (a pointer with a scale). Rotate the knob until the pointer matches the page length being used. See the illustration on page 40.

**NOTE:** If the printer page length does not match the stacker page length, the timing of the stacker swinger arm will be incorrect, resulting in a folding error.

Set the printer page length by following the instructions for changing printer configurations. Refer to the *User's Manual* for details.

## **Removing Paper**

- Upon completion of a print job, press the PAGE EJECT key on the printer control panel, and separate the paper at the perforation.
- 2. Press the DOWN key on the stacker to lower the elevator (stacking table).
- 3. Press the STOP key on the stacker when the elevator is about half-way down.

**NOTE:** The elevator stops automatically when it is fully loaded, without the STOP key being pressed.

- 4. Remove all paper (the completed print job) from the elevator, and do one of the following:
  - To change the paper mode, go to Step 5
  - To reload paper after a paper path error, go to Step 6
  - To resume operation, go to Step 7
- 5. If necessary, you may change the paper mode at this point, by pressing the HEAVY key. ON equals "Heavy Mode" for thicker paper (LED is lit); OFF equals "Normal Mode" for thinner paper (LED is not lit). This key is only active in STOP mode and when there is no paper in the stacker.
- 6. If the printer reports an error which requires the paper path to be cleared, be sure to reload the paper with the first perforation facing inward (see the illustration on page 29). Then press the CLEAR key on the control panel. Otherwise, the paper may jam and/or fold incorrectly.
- 7. Press the AUTO key on the stacker to automatically resume operation.

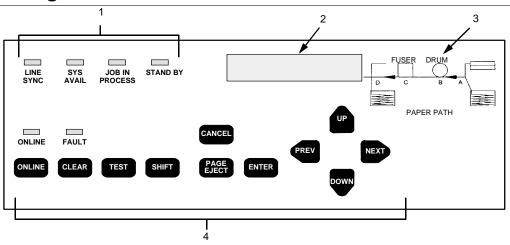
#### CAUTION

Always remove all paper from the elevator before pressing the AUTO key on the stacker. Failure to remove all paper may damage the stacker.

## Stacker Full

- 1. When the stacker becomes full, the printer automatically separates the paper at the perforation, returning the edge of the paper to home position on the tractors.
- 2. Press the DOWN key on the stacker.
- 3. Remove all paper from the stacker elevator.
- 4. Press the AUTO key on the stacker to resume operation.
- 5. Press the CLEAR key on the printer control panel, to clear the fault message and place the printer online.
- 6. Check paper input to the printer to insure the first paper perforation is facing the printer and reload paper, if necessary, to align the first paper perforation.
- 7. If the Reprint on Fault option is enabled in the Paper Control menu, the printer reprints the applicable pages. See the *User's Manual* for more detail.
- 8. Press the ONLINE key on the printer control panel, to place the printer online.

## **Using The Control Panel**



- 1) Status Indicators
- 2) Liquid Crystal Display (LCD)
- 3) Paper Path Diagram
- 4) Function Keys

Figure 5. Control Panel

The control panel is located on the top right side of the front cover.

## **Liquid Crystal Display (LCD)**

The liquid crystal display (LCD) displays messages, printer operating status, configuration options, and error codes.

#### **Status Indicators**

The status indicators display the current operational status of the printer.

#### LINE SYNC

Twinax interface only. Indicates there is activity on the line from the host computer.

#### SYS AVAIL

Twinax interface only. Indicates there is activity to the current address on the line.

#### **JOB IN PROCESS**

When the printer is receiving data or processing data, JOB IN PROCESS flashes. If data has been processed and is waiting to be printed, or has been printed but not yet fused and ejected by the printer, JOB IN PROCESS lights continuously.

JOB IN PROCESS does not light when the printer is not processing data, no data exists in the buffer, and the printer is not receiving data.

#### STAND BY

STAND BY flashes while the printer is executing any control panel command, and while the printer is unavailable for printing due to its normal system activities, such as booting, printing its configuration, writing status information, and loading applications.

#### **IMPORTANT**

Do not press any control panel key when STAND BY is flashing. The printer may carry out unwanted commands.

#### **ONLINE**

ONLINE is lit continuously when the printer is online (when the printer is ready to print and accept data from the host). It flashes when the printer is offline or when the printer stops because of an error.

#### **FAULT**

FAULT flashes when the printer is unavailable for printing because of an internal error.

## **Function Keys**

The pressure-sensitive function keys are located directly below the status indicators. When pressing the keys, a "beep" verifies contact.

The function keys permit you to configure the options of the printer. You can access these options via a structured menu which is displayed on the LCD. To navigate through the options, use the UP, DOWN, NEXT, and PREV keys. Press ENTER to select an option that appears on the LCD.

The purpose of each function key (under normal printing mode) is defined below.

For specific procedures and information regarding the configuration menu, see page 41.

**NOTE:** You can enable or disable the panel key sound via the configuration menu.

#### **ONLINE Key**

The ONLINE key toggles the printer online and offline.

- To place the printer online, press ONLINE until the ONLINE status indicator remains continuously lit. The LCD displays "ONLINE," along with the name of the current emulation. The printer can now receive and process data and print.
- To place the printer offline, press ONLINE until the ONLINE status indicator blinks. The LCD displays "OFFLINE." The printer stops processing and printing any new data, except for any pages in process.
- To start downloading printer operating system files to the printer, hold down the ONLINE + CLEAR keys while cycling printer power. See Chapter 3 for more information.

NOTE: When the printer is not in an error state, pressing ONLINE in any level of the configuration menu causes the printer to accept any configuration changes you have entered and return to online status. When the printer is in an error state, pressing ONLINE in any level of the configuration menu causes the printer to re-display the fault message.

#### **CLEAR Key**

- In the fault state, press the CLEAR key to clear errors and reset the printer to the offline state (if all errors are cleared).
- To start downloading printer operating system files to the printer, hold down the ONLINE + CLEAR keys while cycling printer power. See Chapter 3 for more information.

## **TEST Key**

When the printer is offline, you can run a test print, as configured under the Test Print menu (page 96), by pressing the TEST key. To stop the test print, press TEST again.

Pressing TEST when the printer is online has no effect.

## **SHIFT Key**

This key does not have a function of its own. It is combined with other keys to modify their functions.

## **PAGE EJECT Key**

The PAGE EJECT key performs the following functions when the printer is online:

When the JOB IN PROCESS status indicator lights steadily, pressing PAGE EJECT causes the printer to print all data in the printer. The page is then cut at the perforation (unless the Burst On Eject option is disabled).

When the JOB IN PROCESS status indicator flashes, pressing PAGE EJECT causes the printer to attempt to print any data in the buffer. The paper motion caused by the page eject operation may interrupt the printing of data that is not currently in the buffer.

Once the paper motion has occurred, the data that was not yet in the buffer should print. The page is then cut at the perforation (unless the Burst On Eject option is disabled).

To start downloading files to the printer, power off, then press the PAGE EJECT + ONLINE key and hold them down while powering on the printer. (See "Downloading Files Into Flash Memory" section in Chapter 3.)

#### **IMPORTANT**

Do not press PAGE EJECT while JOB IN PROCESS is flashing, or your print job might become misaligned.

When the JOB IN PROCESS status indicator is not lit or flashing, PAGE EJECT has no effect.

Pressing the SHIFT + PAGE EJECT keys together moves the paper one page length without printing or cutting the paper. It can be used to feed the paper into (customer-supplied) postprocessing equipment.

#### **ENTER Key**

When you are entering parameters in the configuration menu, press ENTER to select the value shown in the LCD. The printer confirms your selection by placing an asterisk (\*) next to the value in the display. However, if the ENTER key is locked, "ENTER SWITCH LOCKED" appears and the value is not accepted.

#### **CANCEL Key**

The CANCEL key performs the following functions when the printer is offline:

- Cancels the current page in process
- Cancels any pages queued to print but not yet printed
- · Cancels any input data not yet processed
- Clears the reprint buffers
- Cancels a download if one is in process

## **UP And DOWN Keys**

The UP and DOWN keys are used for the configuration menu:

- To unlock or lock the ENTER key, press UP + DOWN at the same time when the printer is offline
- The ENTER key lock can be configured to be a key combination other than UP + DOWN. Refer to the "Unlocking And Locking The Configuration Menu" section in Chapter 3 for more information
- To enter the configuration menu, press DOWN when the printer is offline
- To move between the different levels in the configuration menu, press either UP or DOWN as needed

## **NEXT And PREV Keys**

The NEXT and PREV keys are used to move between the parameter options on the current level of the configuration menu. Press NEXT or PREV to move forward or backward through parameter options.

# 3 Consumables Replacement

## **Consumables Replacement**

For the best print quality, the printer consumables should be replaced at the intervals specified in the following table. The yield of the supplies is based on a 4% coverage of letter size (8.5 inch x 11 inch) paper. However, the yield may vary according to your print applications, environmental conditions, and toner density setting

## **Replacement Intervals**

| Consumable Item    | Part Number | Replacement<br>Interval (in Pages) <sup>1</sup> |
|--------------------|-------------|---|
| Toner Cartridge    | 703532-001  | 21,000  |
| Waste Toner Bottle | 703539-001  | 150,000   |
| Photoreceptor Drum | 703535-001  | 150 - 300,000<br>See Note 2                     |
| Developer          | 703548-001  | 150,000   |
| Developing Unit    | 705739-001  | 600,000   |

Note 1: Will vary with paper size, media type, and toner coverage. Note 2: Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g. labels, card stock, plastic, or vinyl) may reduce drum life by as much as 50%.

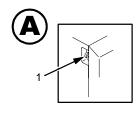
## **Replacing The Toner Cartridge**

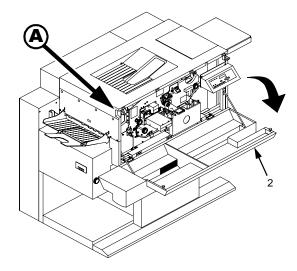
**NOTE:** When replacing the toner cartridge, put the old cartridge on a disposable wrapper (e.g., paper towels, newspaper) to minimize toner spillage.

Vinyl gloves may be worn to prevent toner from contacting the skin. If necessary, use only cold water to remove toner from skin or clothing.

To replace the toner cartridge, perform the following steps:

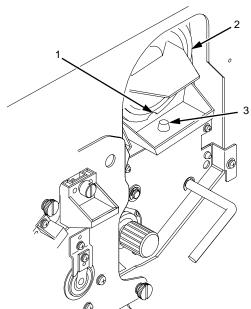
1. Place the printer OFFLINE when paper motion stops, wait 15 seconds, then open the printer front upper cover.





- 1) Open/Close Button
- 2) Front Cover

2. Rotate the old toner cartridge counterclockwise until the notch is aligned with the pin in the toner hopper, and remove the cartridge.

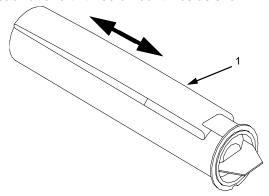


- Notch Toner Cartridge Positioning Pin
- 3. Put the old cartridge into a plastic bag and discard it.

## Chapter 3

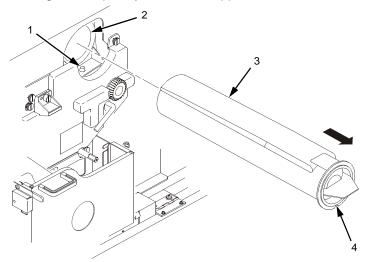
## **Consumables Replacement**

4. Keep the new toner cartridge in its package. Hold it level and shake it back and forth three or four times as shown.



- 1) Toner Cartridge
- 5. Remove the new toner cartridge from its package.

6. With the cover tape facing up, begin inserting the cartridge into the toner hopper, and slowly pull off the cover tape in the direction of the arrow. Remove the last of the tape just as the cartridge is completely inside the hopper.

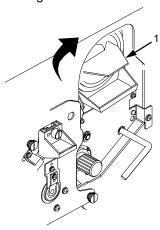


- Pin
- Toner Hopper
- 3) 4) Cover Tape
- Notch
- 7. Fit the notch to the pin on the developing unit. Push the new toner cartridge as far as possible into the toner hopper.

## Chapter 3

## **Consumables Replacement**

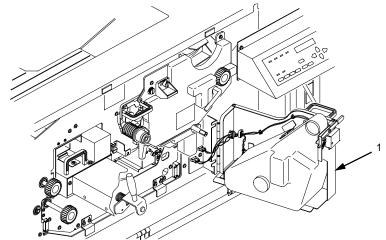
8. Rotate the cartridge clockwise as far as it will turn.



- 1) Toner Cartridge
- 9. If any toner has spilled, remove it with wet tissue paper or a toner vacuum.
- 10. Close the front upper cover.

## **Replacing The Waste Toner Bottle**

The waste toner recovery unit contains the waste toner bottle and is located behind the front cover, as shown below. When the "WASTE TONER FULL" message appears on the control panel, replace the waste toner bottle by performing the following steps, and discard the full bottle. Do not reuse the bottle.



#### Legend:

1) Waste Toner Recovery Unit

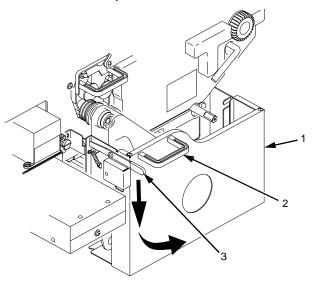
To replace the waste toner bottle, perform the following steps:

 Place the printer OFFLINE when paper motion stops, wait 15 seconds, then open the printer front upper cover.

## Chapter 3

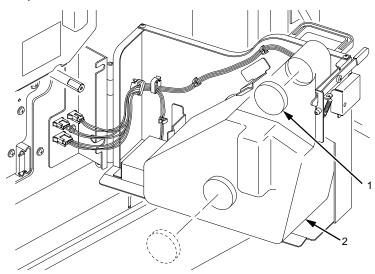
## **Consumables Replacement**

2. Lower the lever, pull the green handle toward you, and open the waste toner recovery unit.



- Waste Toner Recovery Unit Green Handle Opening Lever

3. Remove the cap from the outside of the waste toner bottle, and cap the toner bottle.



- 1) Cap
- 2) Waste Toner Bottle
- 4. Remove the waste toner bottle from the unit and discard it.
- 5. Install a new waste toner bottle.
- 6. Close the printer front cover.
- 7. Clear Error 28, "WASTE TONER FULL," as follows:
  - a. Press CLEAR.
  - b. Press UP and DOWN to unlock the configuration menu.
  - c. Enter the configuration menu and select the Paper Control menu.
  - d. Select the "Reset Toner Full" option and press ENTER.
  - e. Exit the configuration menu.
  - f. Press ONLINE.

## **Replacing The Photoreceptor Drum**

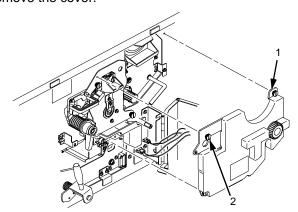
Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

To replace the drum, you will need a drum auxiliary rod. Please read all steps before beginning the replacement procedure.

#### **CAUTION**

Replacement of the photoreceptor drum should be performed only by an individual who has received the appropriate training. Do not attempt this procedure without the drum auxiliary rod (P/N 703531-170), as you may damage the drum.

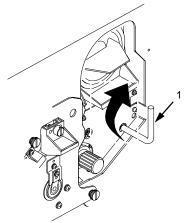
- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover. (See page 52.)
- 3. Open the waste toner recovery unit by pushing downward on the lever. Pull the green handle and swing the unit outward away from the printer. (See page 60.)
- 4. Loosen the three thumbscrews on the upper inner cover. Then remove the cover.



- 1) Inner Cover (upper)
- 2) Thumbscrews (3)

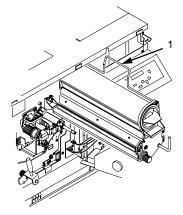
## **CAUTION** Failure to perform Step 5 will damage the photoreceptor drum.

5. Rotate the developing unit lever fully clockwise so that it is pointing straight up (to separate the developing unit from the photoreceptor drum).



#### Legend:

- 1) Lever
- 6. Remove the developing unit by holding the lever in one hand and pulling the developing unit partially out of the printer.



#### Legend:

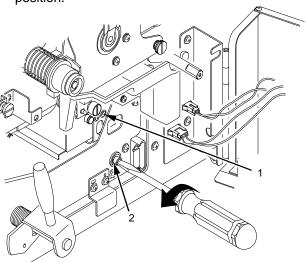
1) Hanger

- 7. With your other hand, grasp the hanger and remove the developing unit from the printer.
- 8. Vacuum any spilled toner.

#### **CAUTION**

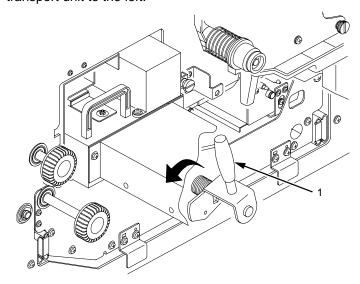
# The transfer charger must be in the down position to avoid scratching the drum.

- 9. Check that the transfer charger is in the down position. Move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



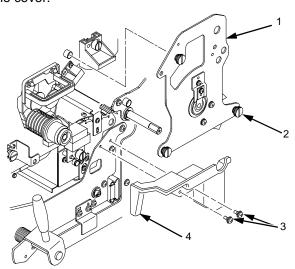
- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

10. Lower the transport unit by turning the green lever on the transport unit to the left.

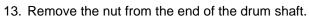


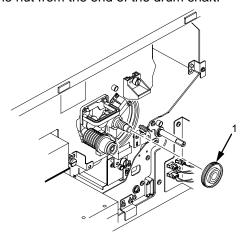
- 1) Green Lever
- 11. Loosen the three thumbscrews securing the drum plate and remove the drum plate.

12. Remove the two screws on the lower inner cover. Then remove the cover.



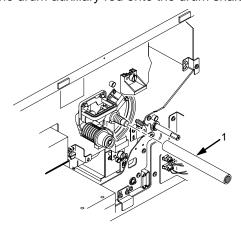
- Drum Plate Thumbscrews (3) Screws (2) Inner Cover
- 1) 2) 3) 4)





#### Legend:

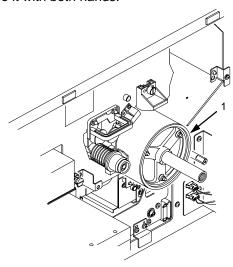
- 1) Nut
- 14. Screw the drum auxiliary rod onto the drum shaft.



#### Legend:

1) Drum Auxiliary Rod

15. Carefully pull the old drum out along the drum auxiliary rod. Hold the ends when the drum is nearly out of the printer, and remove it with both hands.



#### Legend:

- 1) Drum
- 16. Pack the old drum for shipment using the original packaging material, and close the cover of the box.
- 17. Wipe the drum shaft clean with a cloth.

#### **CAUTION**

# Avoid touching the surface of the drum with your hands; it reduces the life of the drum.

 Remove the new photoreceptor drum from its package. Do not discard the packaging material, as it will be needed for future drum disposal.

**NOTE:** The ends of the drum are identical; there are no front or back ends. Wipe inside the endcaps of the drum with a cloth to ensure that they are clean.

#### CAUTION

Exposing the drum to light shortens its life. Do not expose the drum to direct sunlight, and install it within five minutes under typical room lighting conditions. When removing the drum from its packaging, do not touch the surface of the drum, because fingerprints and scratches can damage the surface and cause poor print quality.

19. Using both hands, carefully slide the drum onto the drum auxiliary rod. When the drum reaches the area where the auxiliary rod connects to the drum shaft, lift the drum very slightly over the connection. Let the drum rest on the rubber rollers as you gently guide it into the printer.

#### **CAUTION**

The drum must rest on the rubber rollers to avoid being scratched.

20. When the drum is fully inserted into the printer, the end of the drum will be slightly recessed relative to the front of the printer and the rubber guide rollers should be visible. Slightly lift the drum up off of the rubber rollers and rotate the drum by hand while applying inward pressure, until the drum moves slightly farther into the printer and locks in place.

#### CAUTION

In order to position the drum slot and the drum shaft pin, push the drum in all the way to the back and rotate it until you feel it drop in place. Failure to lock the drum in place properly may cause severe damage to the printer.

Never force the drum onto the shaft. If it feels as though the drum is not seating properly, remove the drum and inspect the shaft for any foreign material or burrs.

- 21. Remove the drum auxiliary rod from the drum shaft.
- 22. Install the nut and tighten it securely by hand on the drum shaft.

#### Chapter 3

#### **Consumables Replacement**

- 23. Install the lower inner cover and secure with the two screws removed earlier.
- 24. Install the drum plate and tighten the thumbscrews. While installing the drum plate, place your thumb over the copper grounding clip and hold it in place. Otherwise the grounding clip can be bent, making no contact with the drum shaft.
- 25. After installing the drum plate, visually verify good electrical contact between the copper grounding clip and the end of the drum shaft.
  - Alternatively, measure the resistance. Connect one lead of an ohmmeter to the bracket on the drum plate, and touch the other lead to the edge of the drum. Normal resistance should be  $0\Omega$ .
- 26. Install the developing unit.
- 27. Raise the transport unit. (Refer to Step 10.)
- 28. Install the upper inner cover and tighten the thumbscrews.
- 29. Close the waste toner recovery unit and ensure that it latches.
- 30. Close the printer front cover.

## **Proper Disposal Of A Drum Unit**

Due to the nature of the material used in drum manufacturing, federal regulations prohibit inappropriate disposal of laser print drums. Dispose of used drums by shipping them to one of the following:

#### Within U.S.A.

U.S. Fuji Electric Inc. 240 Circle Drive N. Piscataway, NJ 08854 Attn: Rod Storm

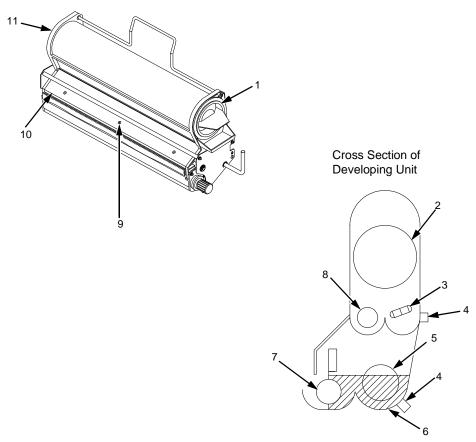
Phone: (732) 560-9410

#### Outside U.S.A.

Fuji Distribution Europe B.V. Attn: Mr. Asada Leisteen 7,2132 ME Hoofddorp, The Netherlands.

TEL: 20-6534790

## **Replacing The Developer**



- 1) Toner Cartridge
  2) Toner Hopper
  3) Auger
  4) Toner Sensor
  5) Agitation Roller
  6) Developing Tank
  7) Developing Roller
  8) Toner Supply Roller
  9) Screws (3)
  10) Cover
  11) Developing Unit

## **Developing Unit Removal**

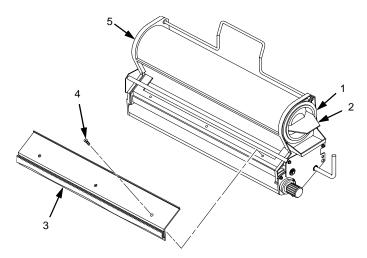
- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover. (See page 52)
- 3. Prepare a plastic bag over which the developing unit can be placed.
- 4. Remove the developing unit from the printer (See page 73.) and place it on the plastic bag.

#### **IMPORTANT**

When replacing developer in an existing developing unit, you must empty and clean the unit before adding new developer (every 150,000 pages).

## **Removing Old Developer**

5. Turn the toner cartridge knob counterclockwise until it stops, then remove the cartridge from the developing unit.



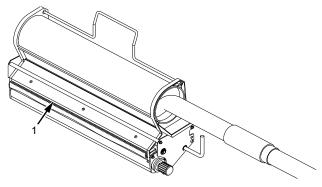
- 1) Toner Cartridge
- 2) Toner Cartridge Knob
- 3) Cover
- 4) Screws (3)
- 5) Developing Unit

6. Remove the three screws on the developing unit cover and detach the cover.

#### **CAUTION**

The toner sensor is sensitive to both electrostatic discharge (ESD) and positional adjustment. Do not touch the sensor with your hand or jar it from its factory-set position.

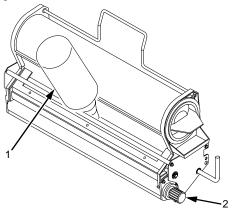
- 7. Put the developing unit in the plastic bag and do the following:
  - Remove the developer and toner in the toner hopper by gently shaking the developing unit up and down with the opening of the toner cartridge facing downward.
  - b. Rotate the developing unit and gently shake it, to allow any remaining developer or toner to fall out of the cover slot.
- 8. Remove the developing unit from the plastic bag and place it on a protected surface.
- Remove any developer and toner which remains on the toner supply roller and the auger by vacuuming the entrance of the toner hopper using a toner vacuum cleaner equipped with a narrow nozzle.



- 1) Toner Spray-Guard Brush
- 10. Vacuum the toner from the toner spray-guard brush on the developing unit.

## **Adding New Developer**

- 11. Shake the new developer bottle several times, remove the bottle cap, and screw the nozzle tightly onto the bottle.
- 12. While rotating the developing roller knob counterclockwise, evenly pour the entire bottle of developer powder into the developing unit.



#### Legend:

- 1) Bottle of new Developer
- 2) Developing Roller Knob
- 13. Replace the cover and tighten the screws.

#### **IMPORTANT**

If toner or developer spills on clothing, use cold water to remove it.

### **Replacing The Developing Unit**

#### **CAUTION**

The developing unit should be removed only by an individual who has received the appropriate training. Be careful not to damage the sensors while cleaning the developing unit. (If damage occurs, contact your service representative.)

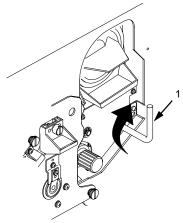
### **Developing Unit Removal**

- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover. (See page 52.)
- 3. Open the waste toner recovery unit by pushing downward on the lever. Pull the green handle and swing the unit outward away from the printer. (See page 60.)
- 4. Remove the three thumbscrews on the upper inner cover. Then remove the cover. (See page 60.)

#### CAUTION

### Failure to perform step 5 will damage the photoreceptor drum.

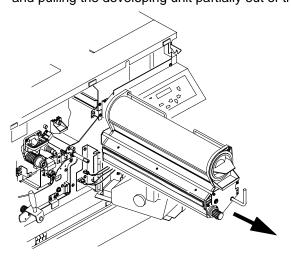
Rotate the developing unit lever fully clockwise so that it is pointing straight up (to separate the developing unit from the photoreceptor drum).



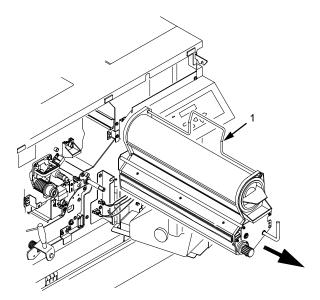
#### Legend:

1) Lever

6. Remove the developing unit by holding the lever in one hand and pulling the developing unit partially out of the printer.



7. With your other hand, grasp the hanger and remove the developing unit from the printer.



#### Legend:

1) Hanger

- 8. Place the old developing unit in a plastic bag and dispose of it properly.
- 9. Vacuum any spilled toner.
- 10. Remove a new developing unit from its package, and add developer to the unit.

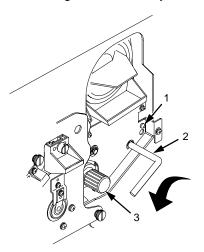
# **Developing Unit Installation**

### **CAUTION**

Failure to perform step 11 will damage the photoreceptor drum.

- 11. On the developing unit, rotate the lever fully clockwise so that it is pointing straight up. (See page 75.)
- 12. Holding the lever in one hand and the hanger in the other hand, insert the developing unit on the guide rail.
- 13. Rotate the hanger to the right so that it rests against the developing unit, and push the developing unit in.

14. Rotate the developing roller knob counterclockwise until the unit drops into its final resting position. The positioning pin should protrude through the main body of the developing unit.



- 1) Positioning Pin
- 2) Lever
- 3) Developer Roller Knob
- 15. Rotate the developing unit lever fully counterclockwise to lock the developing unit in place.
- 16. Install the upper inner cover, and secure it with the three thumbscrews. (See page 60.)
- 17. Close the waste toner recovery unit and ensure that it latches.
- 18. Close the printer front cover.

4

# Scheduled Maintenance

# **Maintaining Print Quality**

To maintain good print quality, clean the printer according to the schedules and procedures listed in this chapter.

If print quality problems occur, clean the following areas (see Maintenance Tools on page 78 for tool part numbers):

1. Do a General Cleaning. (See page 95.)

**NOTE:** Recommended toner vacuum cleaner models are listed on page 78.

- 2. Clean the main charger, precharger, and transfer charger. For cleaning instructions, see page 104 for the main charger, and page 108 for the precharger and transfer charger.
- 3. If the printer is equipped with the cut sheet option, clean the pickup rollers and the reverse rollers inside the cut paper unit, using the Toraysee cloth. For cleaning instructions, see page 115 for the pickup rollers, and page 118 for the reverse rollers.
- 4. Clean the following areas with the designated tools:
  - a. Clean the drum with the drum freshener (only when smears appear on print samples due to the drum).
  - b. Clean the LED array and the SELFOC<sup>®</sup> lens (LED print head) with the Toraysee<sup>™</sup> cloth.
  - c. Clean the fuser cover glass with a razor blade or the cover glass scraper.

### Chapter 4

### **Maintenance Tools**

If the print quality is still poor after cleaning the printer, the chargers may need to be replaced. Contact your authorized service representative for further assistance.

**NOTE:** For replacement intervals, see the maintenance schedules that begin on page 81. For replacement procedures, see Chapter 3, "Consumables Replacement."

### **Maintenance Tools**

In order to perform maintenance on the printer, the following tools are required:

| Item                           | Part Number                   |
|--------------------------------|-------------------------------|
| Brush cleaner                  | 703531-169                    |
| Drum auxiliary rod             | 703531-170                    |
| Drum freshener pad             | 703531-171                    |
| Fuser cover glass scraper      | 703531-187                    |
| Special dry tissue paper       | 703531-188                    |
| Standard toner vacuum cleaner  | See recommended models below. |
| Toraysee cloth                 | 703531-183                    |
| Wire cleaner                   | 703531-168                    |
| 9 inch Phillips #1 screwdriver | N/A                           |

Recommended toner vacuum cleaner models are:

- $3M^{\otimes}$  model 497-AJM standard VAC with Type 1 filter
- 3M model 497-AB 220V with Type 1 filter
- Hitachi<sup>®</sup> CV-TN10 with TN-15 filter

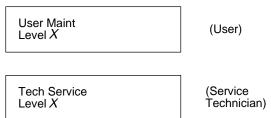
### **Service Level Page Counts**

### **IMPORTANT**

You should maintain a record of all maintenance performed on your printer. Maintenance log sheets are provided starting on page 81. These may be photocopied and kept in a binder near the printer. Be sure to use them each time either you or your service provider perform printer maintenance.

Each time you complete a level of preventive maintenance, you must reset the service level page count by selecting the User Maintenance option on the Maintenance menu. The Maintenance menu is detailed in the *User's Manual*. Levels A, B, and C are your responsibility, while levels D through H are the responsibility of your service provider.

When the page count reaches an increment of one of the maintenance intervals listed below, the control panel displays one of the following messages:



Service Level *X* represents the level of service required:

- Level A = every 15,000 pages
- Level B = every 150,000 pages
- Level C = every 600,000 pages
- Level D = every 300,000 pages
- Level E = every 600,000 pages
- Level F = every 900,000 pages
- Level G = every 1,200,000 pages
- Level H = every 2,400,000 pages

### Chapter 4

### **Maintenance Tools**

A service level includes the levels that precede it. For example, at 150,000 pages, you should perform Level B *and* Level A service. At 900,000 pages, your service provider should perform Level F, Level E, *and* Level D service.

Note that this condition will not cause the printer to stop printing. When one of the above messages appears, you should perform the appropriate scheduled maintenance or call your factory-trained service representative to perform the maintenance.

### **Clearing Service Level Messages**

Once you have performed a level of service, you must clear the page count for that service level. Note that when you clear a higher service level, the levels that precede it are also cleared. For example, clearing level C also clears levels A and B.

To clear a service level (level A, for example), select the Maintenance menu from the control panel, select the User Maint option, then select "Clear Level A" by pressing ENTER.

### **Maintenance Schedules**

# **User Cleaning Schedule**

Each time you perform maintenance, you must reset the service level page count by selecting the User Maintenance option on the Maintenance menu. This removes the maintenance error message. The Maintenance menu is detailed in the *User's Manual*.

The following actions should be performed after the specified number of letter size pages (4% coverage) have been printed.

| Action           | Frequency (Pages)   | Service Level |  |
|------------------|---------------------|---------------|--|
| General cleaning | 15,000 <sup>1</sup> | A             |  |
| Major Cleaning   | 150,000             | В             |  |
|                  |                     |               |  |

Note 1: Every 15,000 pages or 6 paper jams, whichever takes place first.

**NOTE:** On the following pages are maintenance logs you can photocopy.

### Level A Maintenance - 15,000 Pages (User)

| Action                | Item                               | Part #     | Performed By | Date |
|-----------------------|------------------------------------|------------|--------------|------|
| Clean                 | General cleaning                   | n/a        |              |      |
| Clean                 | Main charger                       | 705741-001 |              |      |
| Clean                 | Precharger                         | 705742-001 |              |      |
| Clean                 | Transfer charger                   | 705743-001 |              |      |
| Clean                 | Cover glass                        | n/a        |              |      |
| Clean<br>See Note 1   | Cut sheet cassette pickup rollers  | 703531-050 |              |      |
| Clean<br>See Note 2   | Cut sheet cassette reverse rollers | 703531-051 |              |      |
| Replace<br>See Note 3 | Toner Cartridge                    | 703532-001 |              |      |

Note 1: Every 15,000 pages or 6 page jams, whichever occurs first.

Note 2: Only applies to printers with the cut sheet option installed.

Note 3: Replace the toner cartridge approximately every 21,000 pages or as needed (for page coverage of 4%).

### Level B Maintenance - 150,000 Pages(User)

| Action                | Item                               | Part #     | Performed By | Date |
|-----------------------|------------------------------------|------------|--------------|------|
| Clean                 | General cleaning                   | n/a        |              |      |
| Clean                 | Main charger                       | 705741-001 |              |      |
| Clean                 | Precharger                         | 705742-001 |              |      |
| Clean                 | Transfer charger                   | 705743-001 |              |      |
| Clean<br>See Note1    | Cover glass                        | n/a        |              |      |
| Clean                 | SELFOC lens                        | n/a        |              |      |
| Vacuum                | Lamp housing filter                | 202838-001 |              |      |
| Vacuum                | Cleaning unit                      | 705740-001 |              |      |
| See Note 2            | Photoreceptor drum                 | 703535-001 |              |      |
| Replace<br>See Note 3 | Toner cartridge                    | 703532-001 |              |      |
| Replace               | Developer                          | 703548-001 |              |      |
| Replace               | Waste toner bottle                 | 703539-001 |              |      |
| Replace<br>See Note 4 | Cut sheet cassette pickup rollers  | 703531-050 |              |      |
| Replace<br>See Note 4 | Cut sheet cassette reverse rollers | 703531-051 |              |      |

Note 1: Every 15,000 pages or every 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g. labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: Replace the Toner cartridge approximately every 21,000 pages or as needed (for page coverage of 4%).

Note 4: Only applies to printers with the cut sheet option installed.

### Level C Maintenance - 600,000 Pages (User)

| Action                | Item                               | Part #     | Performed By | Date |
|-----------------------|------------------------------------|------------|--------------|------|
| Clean                 | General cleaning                   | n/a        |              |      |
| Clean<br>See Note 1   | Cover glass                        | n/a        |              |      |
| Clean                 | SELFOC lens                        | n/a        |              |      |
| See Note 2            | Photoreceptor drum                 | 703535-001 |              |      |
| Replace               | Developing unit                    | 703533-001 |              |      |
| Replace<br>See Note 3 | Toner cartridge                    | 705739-001 |              |      |
| Replace               | Waste toner bottle                 | 703539-001 |              |      |
| Replace<br>See Note 4 | Cut sheet cassette pickup rollers  | 703531-050 |              |      |
| Replace<br>See Note 4 | Cut sheet cassette reverse rollers | 703531-051 |              |      |

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., label, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: The Toner cartridge should be replaced approximately every 21,000 pages or as needed (for page coverage of 4%).

Note 4: Only applies to printers with the cut sheet options installed.

# Level D Maintenance - 300,000 Pages (Service)

| Action  | Item                      | Part #     | Performed By | Date |
|---------|---------------------------|------------|--------------|------|
| Clean   | Flash power supply filter | n/a        |              |      |
| Replace | Main charger              | 705741-001 |              |      |
| Replace | Precharger                | 705742-001 |              |      |
| Replace | Transfer charger          | 705743-001 |              |      |
| Replace | Smoke filter              | 703540-001 |              |      |

### Level E Maintenance - 600,000 Pages (Service)

| Action                | Item                      | Part #     | Performed By | Date |
|-----------------------|---------------------------|------------|--------------|------|
| Clean                 | Lamp housing filter       | 202838-001 |              |      |
| Clean                 | LED air filter            | 703543-001 |              |      |
| Clean                 | Flash power supply filter | n/a        |              |      |
| Replace               | Main charger              | 705741-001 |              |      |
| Replace               | Precharger                | 705742-001 |              |      |
| Replace               | Transfer charger          | 705743-001 |              |      |
| Replace<br>See Note 1 | Cleaning unit             | 705740-001 |              |      |
| Replace               | Smoke filter              | 703540-001 |              |      |
| Replace               | Transporting belt-3       | 703531-035 |              |      |

Note 1: When the cleaning unit has been vacuumed every 150,000 pages and has been used under nominal operating conditions, it must be replaced at 600,000 pages. However, it may need to be replaced more frequently if used for high–density printing or printing on uneven media, or if used under severe operating conditions.

# Level F Maintenance - 900,000 Pages (Service)

| Action  | Item                      | Part #     | Performed By | Date |
|---------|---------------------------|------------|--------------|------|
| Clean   | Flash power supply filter | n/a        |              |      |
| Replace | Main charger              | 705741-001 |              |      |
| Replace | Precharger                | 705742-001 |              |      |
| Replace | Transfer charger          | 705743-001 |              |      |
| Replace | Smoke filter              | 703540-001 |              |      |
| Replace | Xenon lamp                | 703541-001 |              |      |

### Level G Maintenance - 1,200,000 Pages (Service)

| Action                | Item                      | Part #     | Performed By | Date |
|-----------------------|---------------------------|------------|--------------|------|
| Clean                 | Lamp housing filter       | 202838-001 |              |      |
| Clean                 | LED air filter            | 703543-001 |              |      |
| Clean                 | Flash power supply filter | n/a        |              |      |
| Replace               | Main charger              | 705741-001 |              |      |
| Replace               | Precharger                | 705742-001 |              |      |
| Replace               | Transfer charger          | 705743-001 |              |      |
| Replace<br>See Note 1 | Cleaning unit             | 705740-001 |              |      |
| Replace               | Smoke filter              | 703540-001 |              |      |
| Replace               | Transporting belt-3       | 703531-035 |              |      |

Note 1: When the cleaning unit has been vacuumed every 150,000 pages and has been used under nominal operating conditions, it must be replaced at 600,000 pages. However, it may need to be replaced more frequently if used for high–density printing or printing on uneven media, or if used under severe operating conditions.

### Level H Maintenance - 2,400,000 Pages (Service)

| Action                | Item   | Part #                                 | Performed By | Date |
|-----------------------|--|--|--------------|------|
| Clean                 | Flash power supply filter                        | n/a                                    |              |      |
| Replace               | Main Charger                                     | 705741-001                             |              |      |
| Replace               | Precharger                                       | 705742-001                             |              |      |
| Replace               | Transfer charger                                 | 705743-001                             |              |      |
| Replace<br>See Note 1 | Cleaning unit                                    | 705740-001                             |              |      |
| Replace               | Smoke filter                                     | 703540-001                             |              |      |
| Replace               | Transporting belt-3                              | 703531-035                             |              |      |
| Replace               | Lamp housing filter                              | 202838-001                             |              |      |
| Replace               | LED air filter                                   | 703543-001                             |              |      |
| Replace               | Tractor belt 3M264                               | 703531-031                             |              |      |
| Replace               | Drum belt 3M264                                  | 703531-031                             |              |      |
| Replace               | Capacitor (see <i>WARNING</i> on following page) | 703542-001                             |              |      |
| Replace               | LED for discharge lamp                           | 703531-118                             |              |      |
| See Note 2            | Feed Roller                                      | 703531-563                             |              |      |
| See Note 2            | Resist Roller                                    | 703531-565                             |              |      |
| See Note 2            | Roller, Pre Drum                                 | 703531-590                             |              |      |
| See Note 2            | Lever, Empty                                     | 202840-001                             |              |      |
| Replace               | EPS1, EPS3, and EPS4<br>Sensor Levers            | 703531-585<br>703531-588<br>703531-067 |              |      |

Note 1: When the cleaning unit has been vacuumed every 150,000 pages and has been used under nominal operating conditions, it must be replaced at 600,000 pages. However, it may need to be replaced more frequently if used for high–density printing or printing on uneven media, or if used under severe operating conditions.

Note 2: Clean and inspect; replace if worn. (Only applies to printers with the cut sheet option installed.)

#### WARNING

The flash fuser capacitor (P/N 703531-561) must be replaced at least every 2,400,000 letter size pages. Failure to do so may endanger equipment and personnel.

#### WARNUNG

Der kondensator der Flash-Einbrennvorrichtung muß nach mindestens 2.400.000 Seiten im Format "Letter" ausgetauscht werden. Geschieht dies nicht, ist mit Personen- und Sachschäden zu rechnen.

#### **AVISO**

El condensador flash del fusor se debe sustituir como mínimo cada 2.400.000 páginas de tamaño carta. De lo contrario, pueden causarse daños a los equipos y al personal.

#### **ATTENTION**

Pour éviter tout risque de dégâs matériels et corporels, remplacez l'unité de flashage aprés l'impression de 2 400 000 pages de format lettre.

#### **AVVERTENZA**

Il condensatore dell'unitá fusore deve essere sostituito almeno ogni 2.400.000 pagine in fprmato lettera. La mancata sostituzione puó causare lesione al personale e danni all'apparecchiatura.

### **User Replacement Schedule**

The following items should be replaced after the specified number of letter size pages (4% coverage) have been printed.

| Item                               | Part Number | Frequency<br>(Pages)      | Service Level |
|------------------------------------|-------------|---------------------------|---------------|
| Toner Cartridge                    | 703532-001  | 21,000                    | As needed     |
| Waste toner bottle                 | 703539-001  | 150,000                   | В             |
| Photoreceptor Drum                 | 703535-001  | 150-300,000<br>See Note 1 | B (As needed) |
| Developer                          | 703548-001  | 150,000                   | В             |
| Cut sheet cassette pickup rollers  | 703531-050  | 150,000<br>See Note 2     | В             |
| Cut sheet cassette reverse rollers | 703531-051  | 150,000<br>See Note 2     | В             |
| Developing unit                    | 705739-001  | 450,000                   | С             |

Note 1: Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 2: Only applies to printers with the cut sheet option installed.

### **Tech Service Replacement Schedule**

Each time a service technician completes a level of preventive maintenance, he or she must reset the service level page count by selecting the Technician Service option on the Maintenance menu. This removes the maintenance error message.

The following actions should be performed by a service technician after the specified number of letter size pages (4% coverage) have been printed.

| Item                      | Part #     | Frequency<br>(Pages)    | Action  | Service<br>Level |
|---------------------------|------------|-------------------------|---------|------------------|
| Main charger              | 705741-001 | 300,000                 | Replace | D                |
| Precharger                | 705742-001 | 300,000                 | Replace | D                |
| Transfer charger          | 705742-001 | 300,000                 | Replace | D                |
| Smoke filter              | 703540-001 | 300,000                 | Replace | D                |
| Flash power supply filter | n/a        | 300,000                 | Clean   | D                |
| LED air filter            | 703543-001 | 600,000                 | Clean   | E                |
| Lamp housing filter       | 202838-001 | 600,000                 | Clean   | E                |
| Cleaning unit             | 705740-001 | 600,000<br>See Note 1   | Replace | Е                |
| Transporting belt-3       | 703531-035 | 600,000                 | Replace | E                |
| Xenon lamp                | 703541-001 | 900,000                 | Replace | F                |
| Main charger              | 705741-001 | 1,200,000               | Replace | G                |
| Precharger                | 705742-001 | 1,200,000               | Replace | G                |
| Transfer charger          | 705743-001 | 1,200,000               | Replace | G                |
| Cleaning unit             | 705740-001 | 1,200,000<br>See Note 1 | Replace | G                |
| Lamp housing filter       | 202838-001 | 2,400,000               | Replace | Н                |

| LED air filter                       | 703543-001 | 2,400,000               | Replace                             | Н |
|--------------------------------------|------------|-------------------------|-------------------------------------|---|
| Tractor belt, 3M264                  | 793531-031 | 2,400,000               | Replace                             | Н |
| Drum belt, 3M264                     | 703531-031 | 2,400,000               | Replace                             | Н |
| Capacitor (see WARNING on next page) | 703542-001 | 2,400,000               | Replace                             | Н |
| LED for discharge lamp               | 703531-118 | 2,400,000               | Replace                             | Н |
| Feed Roller                          | 703531-563 | 2,400,000<br>See Note 2 | Clean and inspect: replace if worn, | Н |
| Resist Roller                        | 703531-565 | 2,400,000<br>See Note 2 | Clean and inspect; replace if worn. | Н |
| Roller; Pre Drum                     | 703531-590 | 2,400,000               | Clean and inspect; replace if worn, | Н |
| Lever, Empty                         | 202840-001 | 2,400,000<br>See Note 2 | Clean and inspect; replace if worn  | Н |
| EPS1 Sensor Lever                    | 703531-585 | 2,400,000               | Replace                             | Н |
| EPS2 Sensor Lever                    | 703531-588 | 2,400,000               | Replace                             | Н |
| EPS3 Sensor Level                    | 703531-067 | 2,400,000               | Replace                             | Н |
|                                      |            |                         |                                     |   |

Note 1: When the cleaning unit has been vacuumed every 150,000 pages and has been used under nominal operating conditions, it must be replaced at 600,000 pages. However, it may need to be replaced more frequently if used for high-density printing or printing on uneven media, or if used under severe operating conditions.

Note 2: Only applies to printers with the cut sheet option installed.

#### WARNING

The flash fuser capacitor (P/N 703531-561) must be replaced at least every 2,400,000 letter size pages. Failure to do so may endanger equipment and personnel.

#### WARNUNG

Der kondensator der Flash-Einbrennvorrichtung muß nach mindestens 2.400.000 Seiten im Format "Letter" ausgetauscht werden. Geschieht dies nicht, ist mit Personen- und Sachschäden zu rechnen.

#### **AVISO**

El condensador flash del fusor se debe sustituir como mínimo cada 2.400.000 páginas de tamaño carta. De lo contrario, pueden causarse daños a los equipos y al personal.

#### **ATTENTION**

Pour éviter tout risque de dégâs matériels et corporels, remplacez l'unité de flashage aprés l'impression de 2 400 000 pages de format lettre.

#### **AVVERTENZA**

Il condensatore dell'unitá fusore deve essere sostituito almeno ogni 2.400.000 pagine in fprmato lettera. La mancata sostituzione puó causare lesione al personale e danni all'apparecchiatura.

#### **CAUTION**

Due to the high temperature of the flash fusing unit, keep the area under the fuser free of paper debris.

# **General Cleaning**

To maintain optimum print quality, the printer should be cleaned on a regular basis. Depending upon the density of your print jobs, the printer may require cleaning every 10,000-20,000 sheets.

### **Vacuuming The Printer**

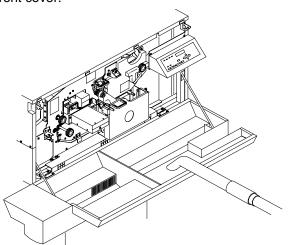
Clean the following areas with a toner vacuum cleaner to remove loose toner particles, paper dust, and other debris:

- · Paper input and exit areas
- Front cover
- · Waste toner area
- Area around the developing unit (including the toner cartridge and spray-guard brush)
- Entire paper transport system
- Area around the cleaning unit

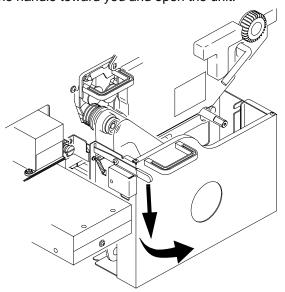
### Chapter 4 General Cleaning

Following is the general cleaning procedure:

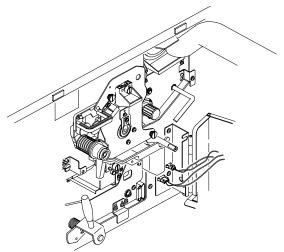
- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover.
- 3. Using a vacuum, clean the toner, paper dust, etc. inside the front cover.



4. On the waste toner recovery unit, press the Open lever down. Pull the handle toward you and open the unit.



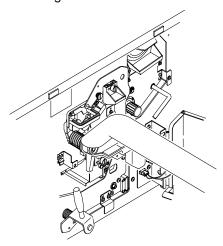
5. Vacuum the developing unit and toner hopper.



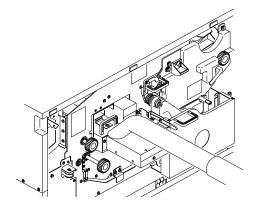
# Chapter 4

### **General Cleaning**

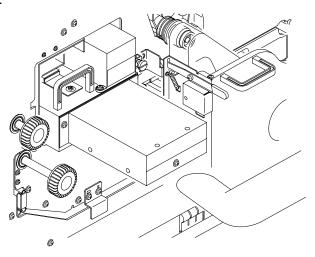
6. Vacuum the cleaning unit.



7. Vacuum the fuser unit.



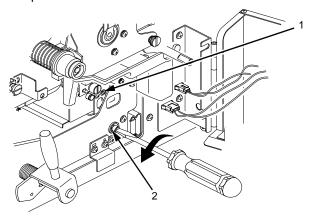
8. Vacuum the lamp housing filter on the underside of the fuser unit.



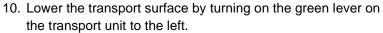
### **CAUTION**

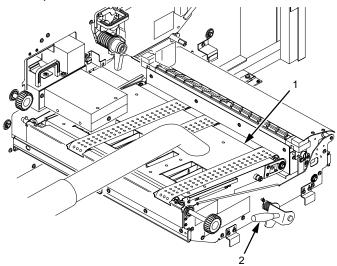
The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 9 and 10 will damage the drum.

- 9. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



- Transfer Charger Transfer Elevator Drive Shaft



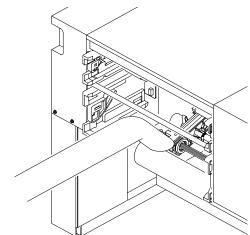


- 1) Transport Unit
- 2) Green Lever
- 11. Pull the transport unit toward you until it stops.
- 12. Using a vacuum, clean the toner, paper dust, etc. Be sure to clean under the transport unit as well.
- 13. Wipe off the dirt on the transport surface with wet tissue paper.
- Using an ammonia-based wax-free cleaner or rubbing alcohol, clean the belts to remove residue buildup and restore their tacky surface.
- 15. Push the transport unit into the printer while holding down the green lever. When the transport unit is in position, raise the green lever to the right to raise the transport surface.

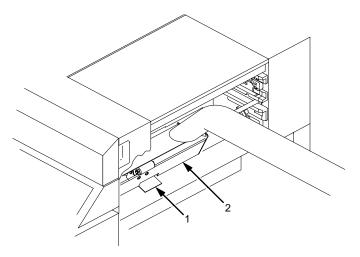
### Chapter 4

### **General Cleaning**

16. Using a vacuum, clean the toner, paper dust, etc. in the tractor area.

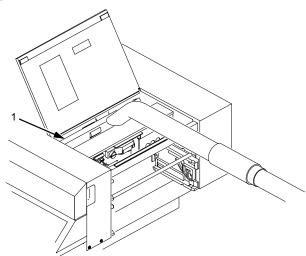


17. Open the paper guide by pressing the green lever down.



- Green Lever Paper Guide

- 18. Using a vacuum, clean the paper dust, etc. inside the paper guide.
- 19. Open the lid on the top cover.
- 20. Open the paper guide by pressing the guide lever down.
- 21. Using a vacuum, clean the paper dust, etc. inside the paper guide.



#### Legend:

1) Paper Guide

# **Cleaning The Chargers**

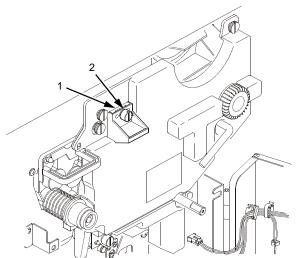
- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover.

# **Main Charger**

### **CAUTION**

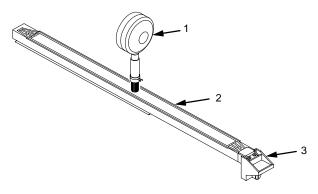
Use caution in handling to avoid damaging or breaking the charger wires.

3. Loosen the thumbscrew and remove the main charger by pulling it toward you.



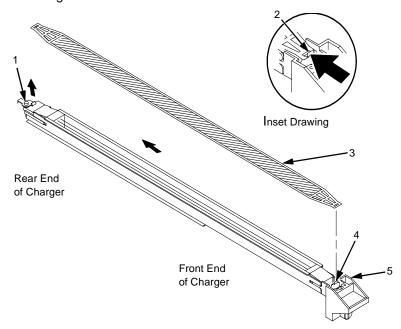
- 1) Main Charger
- 2) Thumbscrew
- 4. Place the main charger on a flat, clean work surface.

5. Using the brush cleaner (listed on page 78), clean the exposed side of the charger grid and the body of the main charger.



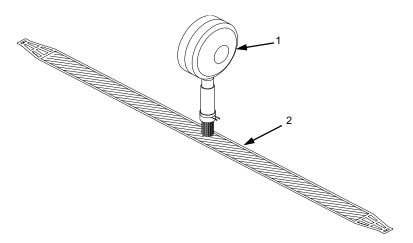
- Brush Cleaner
   Charger Grid
   Main Charger

- 6. Position the main charger with the charger grid up and the front of the charger toward you, as shown in the figure below. Refer to the inset drawing in the figure and remove the charger grid from the main charger as follows:
  - a. While pressing the front retaining tab toward the rear of the charger, unhook the rear end of the charger grid from the rear retaining tab.
  - b. Release the front retaining tab, then remove the charger grid from it.



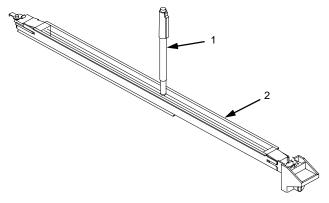
- Rear Retaining Tab
- Front Retaining Tab (See Inset Drawing)
- Charger Grid
- 2) 3) 4) 5) Front Retaining Tab
- Main Charger

7. Using the brush cleaner (listed on page 78), clean both sides of the charger grid, as shown below.



#### Legend:

- Brush Cleaner
- Charger Grid
- 8. Using the wire cleaner (listed on page 78), clean the two wires in the main charger, as shown below. Be sure that both wires are cleaned thoroughly. When dirt is caked on, the wires feel gritty. When clean, the wires feel smooth.



- Wire Cleaner Main Charger

### Chapter 4

### **General Cleaning**

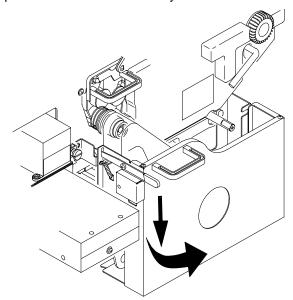
- 9. Install the charger grid.
- 10. Return the main charger to its original position. Fasten the main charger screw to secure it.

# **Precharger and Transfer/Separator Charger**

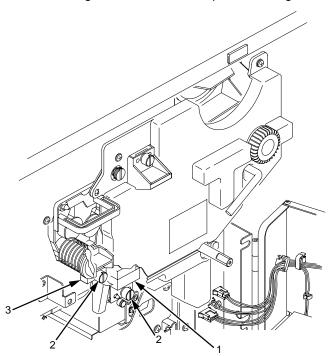
### **CAUTION**

Use caution in handling to avoid damaging or breaking the charger wires.

11. Open the waste toner recovery unit.



12. Loosen the precharger thumbscrew, and transfer/separator charger thumbscrew, and pull the chargers out of the printer.



- 1) Transfer/Separator Charger
- 2) Thumbscrews
- 3) Precharger
- 13. Place the chargers on a flat, clean work surface.
- 14. Using the brush cleaner and the wire cleaner (listed on page 78), remove the dust and dirt on the wires. When dirt is caked on, the wires feel gritty. When clean, the wires feel smooth.
- 15. Install the chargers. Fasten the charger screws to secure them.

## **Cleaning The Fuser Unit Cover Glass**

#### **WARNING**

The fuser unit remains hot after operation. Wait until it has completely cooled down before handling it.

#### **WARNUNG**

Die Einbrennvorrichtung behält auch nach dem Betrieb ihre Temperatur bei. Fassen Sie sie erst an, wenn sie *vollständig* abgekuhlt ist.

#### **AVISO**

La unidad de fusor estará a alta temperatura después de funcionar. Espere a que se haya en friado *por completo* antes de manipularia.

#### **ATTENTION**

L'unité de four est encore trés chaude aprés chaque opération. Attendez qu'elle refroidisse complétement avant de la manipuler.

#### **AVVERTENZA**

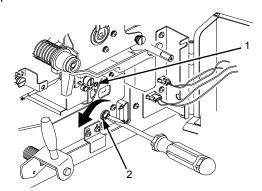
Dopo l'uso, l'unitá fusore é calda. Attendere il *completo* raffeddamento dell'unitá prima di intervenir sulla medesima.

- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover.

#### **CAUTION**

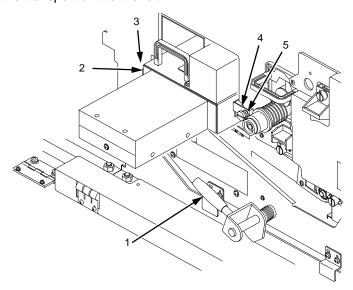
The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 3 and 4 will damage the drum.

- 3. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

4. Lower the transport surface by turning on the green lever on the transport unit to the left.



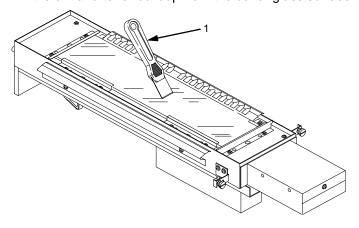
#### Legend:

- Green Lever
- Fuser Unit
- 3) Thumbscrew (not visible in figure)
- 4) 5) Holding Plate
- Thumbscrew
- 5. Loosen the thumbscrews on the right and left fuser unit holding plates.
- 6. Grasp the handle and pull out the fuser unit until the second handle is visible.
- 7. With the other hand, grasp the second handle and remove the fuser from the printer.
- 8. Place the fuser on a clean, flat surface with the cover glass facing up.

#### **CAUTION**

Do not scratch or place your hands directly on the cover glass. Fingerprints on the cover glass or lamps will cause them to break.

9. Using the fuser cover glass scraper (listed on page 78) remove the dirt and toner buildup from the cover glass surface.

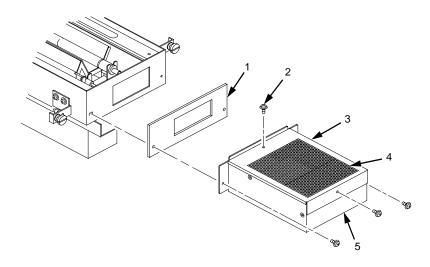


- 1) Scraper
- 10. Wipe away any remaining toner or dirt with a Toraysee cloth (listed on page 78).

### Chapter

#### **General Cleaning**

11. Remove the two screws that secure the lamp duct filter unit to the fuser, then remove the lamp duct filter unit and the foam gasket.



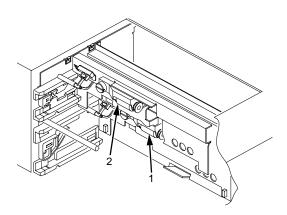
- 1) Foam Gasket
- 2) Screw (4)
- 3) Filter Holding Plate
- 4) Lamp Filter (Air Filter)
- 5) Lamp Duct
- 12. Remove the two screws that secure the filter holding plate to the lamp duct filter unit, then remove the lamp filter.
- 13. Vacuum the lamp filter, then install it.
- 14. Vacuum any paper dust from the printer frame.
- 15. Install the fuser, making sure that the guide pins in the screw bracket align with the holes in the side frame of the printer.

## **Cleaning The Cut Sheet Option Rollers**

NOTE: This procedure only applies to printers with the cut sheet option installed.

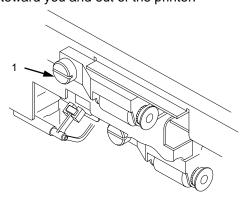
- 1. Turn the power switch OFF.
- 2. Remove the upper and lower paper cassettes from the printer.

## **Pickup Rollers**



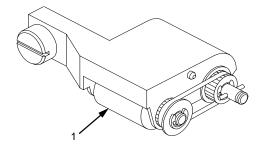
- Lower Pickup Roller Unit Upper Pickup Roller Unit

3. There are two pickup roller units (upper and lower) located at the back of the cassette opening. On the upper roller unit, loosen the green thumbscrew. Slide the unit to the left, and pull the unit toward you and out of the printer.



#### Legend:

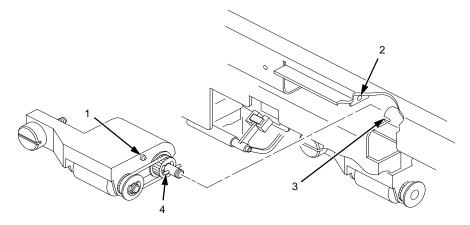
- 1) Thumbscrew
- 4. On the lower roller unit, loosen the green thumb screw. Slide the unit to the left, and pull the unit toward you and out of the printer.
- 5. Wipe off the dirt on the pickup rollers with a Toraysee cloth (listed on page 78). Remove any label adhesive or forms residue with rubbing alcohol.



#### Legend:

1) Roller

- 6. Install the upper and lower pickup roller units:
  - a. Align the shaft pin with the slot in the coupling, and align the alignment pin on the unit with the hole in the frame.
  - b. Tighten the green thumbscrew.

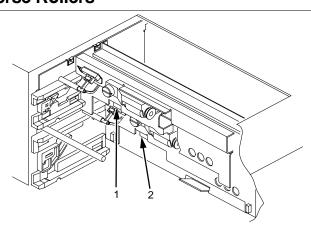


#### Legend:

- 1) 2) 3) 4)
- Alignment Pin Hole In The Frame Coupling Shaft Pin

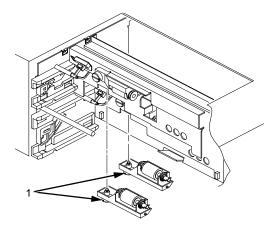
117

## **Reverse Rollers**



#### Legend:

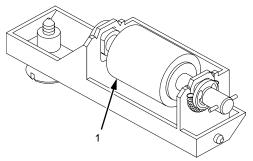
- 1) Upper Reverse Roller Unit
- 2) Lower Reverse Roller Unit
- 7. There are two reverse roller units (upper and lower) located at the back of the cassette opening (underneath the upper and lower pickup roller units). On the upper reverse roller unit, loosen the green thumbscrew. Remove the roller unit by moving it downward while sliding it to the left.



#### Legend:

1) Thumbscrews

- 8. On the lower reverse roller unit, loosen the green thumbscrew. Remove the roller unit by moving it downward while sliding it to the left.
- 9. Wipe off the dirt on the reverse rollers with a Toraysee cloth (listed on page 78). Remove any label adhesive or forms residue with rubbing alcohol.



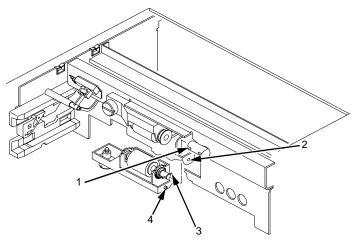
#### Legend:

1) Roller

## Chapter 4

#### **General Cleaning**

- 10. Install the upper and lower reverse roller units:
  - a. Align the shaft pin with the slot in the coupling, and align the alignment pin on the unit with the hole in the frame.
  - b. Tighten the green thumbscrew.



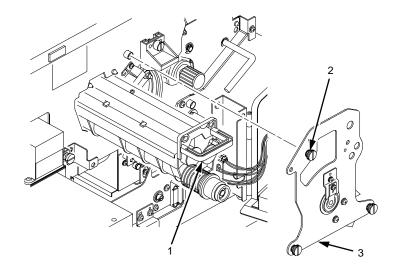
- Coupling Hole In The Frame Shaft Pin
- Alignment Pin
- 11. Install the upper and lower paper cassettes into the printer.

## **Major Cleaning**

- 1. Turn the power switch OFF.
- 2. Open the printer front upper cover. (See page 52.)

## **Cleaning Unit**

- 3. Open the waste toner recovery unit by pushing downward on the lever. Pull the green handle and swing the unit outward away from the printer. (See page 60.)
- 4. Loosen the three thumbscrews on the upper inner cover. Then remove the cover. (See page 60.)
- 5. Loosen the three thumbscrews securing the drum plate and remove the drum plate.
- 6. Remove the cleaning unit by grasping its handle and pulling it toward you.



- 1) Cleaning Unit Handle
- 2) Thumbscrews (3)
- 3) Drum Plate

#### Chapter 4

#### **Major Cleaning**

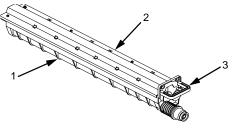
#### **IMPORTANT**

Do not turn the cleaning unit upside down, or toner might spill.

7. Vacuum the brush on the cleaning unit. Turn the end of the shaft to rotate the brush. Continue to rotate and vacuum the brush until the entire brush surface has been cleaned.

#### **IMPORTANT**

Do not touch the brush surface with your hand.



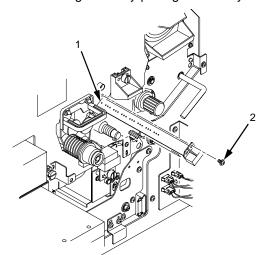
- Brush Cleaning Unit Cleaning Unit Handle

## **Discharge LED**

#### **CAUTION**

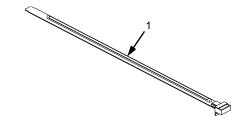
Do not flex the discharge LED as it will break.

- 8. Remove the discharge LED screw.
- 9. Remove the discharge LED by pulling it toward you.



#### Legend:

- 1) Discharge LED
- Screw
- 10. Using a Toraysee cloth (listed on page 78), wipe off the dirt on the discharge LED.



- 1) Discharge LED
- 11. Return the discharge LED to its original position.

## **Photoreceptor Drum**

#### **CAUTION**

When cleaning the photoreceptor drum, observe the following precautions:

- Do not touch the drum surface with your hands.
- To prevent the drum surface from being scratched, clean it in a location free of dust.
- Cleaning the drum may result in stains. A drum left unused in the printer for a long time after cleaning may especially be affected. Therefore, after cleaning and installing the drum in the printer, use maximum size paper to print an image repeatedly until no stains remain. Stains will usually be cleared after printing a few dozen pages.
- 12. Remove the photoreceptor drum from the printer. (Refer to page 60.)
- 13. Place the drum on a covered work surface.
- 14. If the drum is only slightly dirty, clean it with ethanol or isopropyl alcohol. **Do not use acetone.**

15. If the drum has toner build-up, clean it with the drum freshener pad (listed on page 78). Turn the drum little by little while polishing the drum surface with the freshener pad. Polish with a slight force in the direction of the drum axis, using a circular motion. Let the polished areas slightly overlap each other, and polish the entire drum surface two or three times.

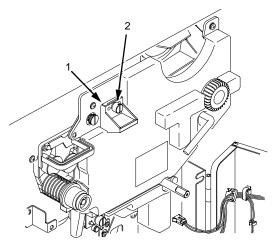
#### **CAUTION**

## Press lightly when polishing the drum surface, as too much pressure can damage the drum.

- 16. Using the special dry tissue paper (listed on page 78), thoroughly wipe the drum freshener off the drum surface.
- 17. Wipe the drum surface again using a Toraysee cloth (listed on page 78).
- 18. To avoid exposing the drum to light too long, temporarily pack the drum in its original packaging material, and close the box cover. Set the drum aside for now.
- 19. Remove the drum auxiliary rod from the drum shaft.
- 20. Wipe the drum shaft clean with a cloth.

## **Cleaning The Developing Area**

21. Loosen the thumbscrew and remove the main charger by pulling it toward you.



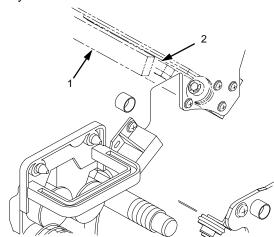
- Thumbscrew Main Charger
- 22. Clean the developing unit area with a vacuum cleaner and a soft cloth.

23. Wipe the SELFOC® lens by moving a Toraysee cloth (listed on page 78) from the inner part of the printer toward you. Wipe the lens several times until there is no more dirt on the cloth.

#### **CAUTION**

When wiping the SELFOC lens, be certain not to apply excessive force to the drum surface potential sensor near the SELFOC lens, as this may dislocate the sensor. (If this happens, contact your service representative.)

NOTE: Always wipe the SELFOC lens with the unused side of the Toraysee.



- SELFOC Lens Drum Surface Potential Sensor
- 24. Install the main charger.
- 25. Install the cleaning unit.
- 26. Install the photoreceptor drum. (Refer to page 60.)
- 27. Install the developing unit. (Refer to page 75.)

Chapter 4

**Major Cleaning** 

# 5

## **Troubleshooting**

## **Troubleshooting**

This chapter discusses diagnostic tests, paper jams, and status and error messages. For cleaning procedures and schedules, refer to Chapter 4, "Scheduled Maintenance."

## **Diagnostics**

The printer includes self-diagnostic circuits and software to aid in the discovery, prevention, and correction of system problems and failures. Printer diagnostics fall into these categories:

- Offline Diagnostics
- Online Diagnostics

## **Offline Diagnostics**

Most of the software diagnostics are executed when the printer is powered on, and when you request diagnostic information through the control panel.

#### **Power-on Self Test**

Each time the printer is powered on, it performs a power-on self test. There is no printout during this test. However, the printer displays any errors on the control panel, accompanied by an audible alarm.

You may request the following diagnostic and configuration information via the control panel, through various menus:

#### Chapter 5

#### **Fanfold Paper Jams**

- Test Print: Prints various predefined graphics pages to verify that the printer can print properly on the entire page (Test Print menu).
- Print Statistics: Displays all accumulated print engine statistics, such as number of pages printed and power-on time. This is a display-only feature; there is no printout (Print Statistics menu).
- Print Configuration: Prints all current configuration parameters in the printer, including print statistics (Config. Control menu).

## **Online Diagnostics**

When online, the printer continues to sense and report problems or conditions as they arise. When an error is detected, the printer halts, lights the appropriate LED, and displays the proper error message on the control panel. The error message will remain displayed until the error condition is cleared and you press CLEAR.

After the error is cleared, the printer will reprint any pages that were not ejected prior to the error, provided the Reprint on Fault option is enabled. See the *User's Manual* for more detailed information.

## **Fanfold Paper Jams**

#### CAUTION

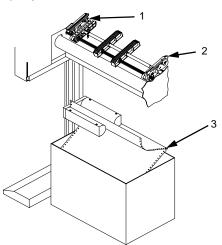
Due to the high intensity of the flash fusing unit, keep the area under the fuser free of paper debris.

**NOTE:** For information on removing paper and avoiding paper jams when using the optional power paper stacker, see page 43.

## **Paper Jam Near The Tractor**

- Raise the tractor gates.
- 2. Pull out the jammed paper. If the end of the paper is crumpled, tear it away from the perforation.

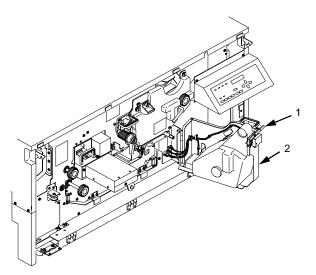
3. Reload the paper. The first fold of the paper should face the printer; otherwise, a paper jam could occur during printing (see illustration). Do not push the paper past the tractors into the area of the paper jam sensor.



- Left Tractor
   Right Tractor
   First paper fold is toward printer.

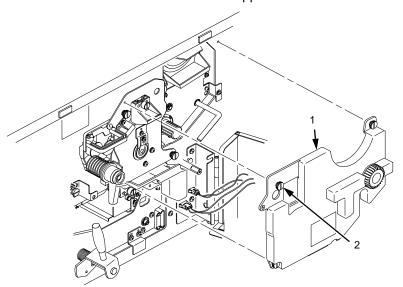
## **Paper Jam Near The Paper Output Section**

- 1. When paper motion stops, wait 15 seconds, then open the front cover.
- 2. Push down on the opening lever of the waste toner recovery unit, and pull the green handle to swing the unit outward away.



- 1) Waste Toner Recovery Unit
- 2) Opening Lever



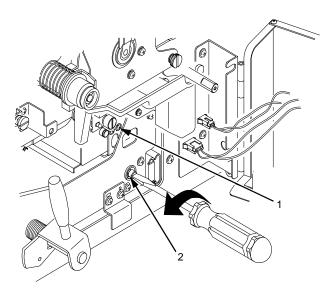


- Upper Inner Cover Thumbscrews (3)

#### **CAUTION**

The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 4 and 5 will damage the drum.

- 4. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the fully down position.

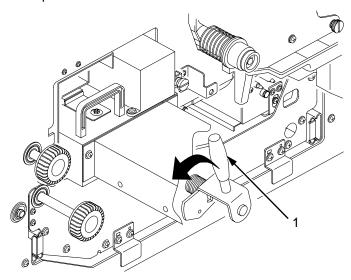


- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

#### CAUTION

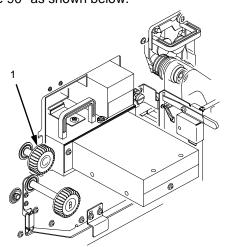
To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before opening the transport unit.

5. Lower the transport unit by turning the green lever on the transport unit to the left.



- 1) Green Lever
- 6. Check to see if any paper is jammed.

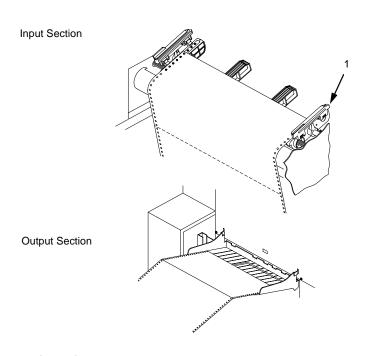
7. To raise the scuff roller holding the paper, turn knob C clockwise  $90^{\circ}$  as shown below.



#### Legend:

- 1) Knob C
- 8. Separate the fanfold paper at the perforations on both the paper *input* and the *output* sections. Then remove the jammed paper by pulling it out.

When removing the paper from the paper *input* section, raise the tractor gates first, then pull out the jammed paper.



#### Legend:

1) Tractor Gate

#### **CAUTION**

To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before closing the transport unit.

- 9. After removing the pieces of jammed paper, restore the transport unit, waste toner recovery unit, and knob C to their original positions, and close the upper doors.
- 10. Reload the paper.

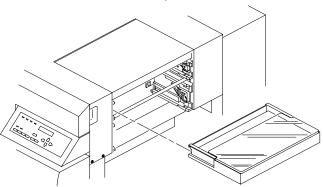
## **Cut Sheet Paper Jams**

#### **CAUTION**

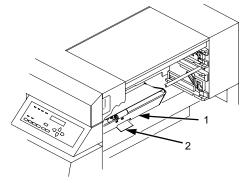
Due to the high intensity of the flash fusing unit, the area under the fuser must be kept free of paper debris.

## Paper Jam At The Back Of The Paper Cassette

1. Pull out the paper cassette, then remove any jammed paper from the back of the cassette tray.

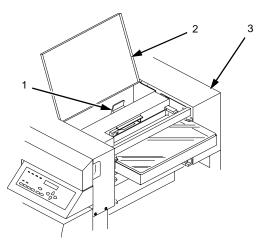


2. To lower the paper guide, pull the green lever up. Remove any jammed paper, and return the green lever to its original position.



- 1) Paper Guide
- 2) Green Lever

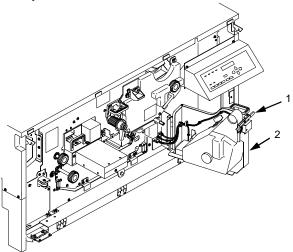
3. Open the lid on the top cover, and pull the green lever up. Remove any jammed paper, and return the green lever to its original position.



- Green Lever
   Lid
   Top Cover

## **Paper Jam In The Transport Input Section**

- 1. When paper motion stops, wait 15 seconds, then open the front cover.
- 2. Open the waste toner recovery unit cover, and pull the unit toward you.

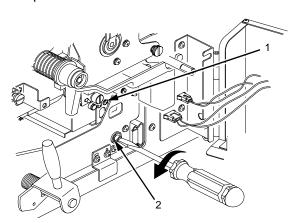


- Opening Lever Waste Toner Recovery Unit

#### **CAUTION**

The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 3 and 4 will damage the drum.

- 3. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
  - a. If the charger starts to move up, it is already in the down position.
  - If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.

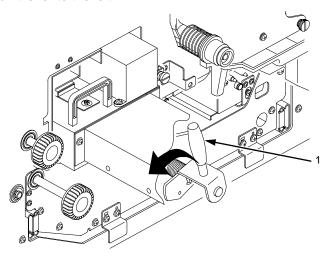


- 1) Transfer Charger
- 2) Transfer Elevator Drive Shaft

### **CAUTION**

To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before opening or closing the transport unit.

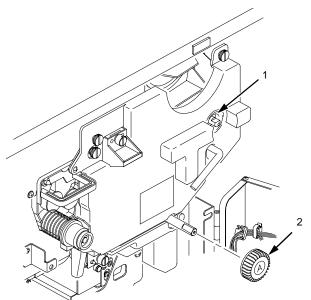
4. To lower the transport route surface, turn the green transport unit lever to the left.



#### Legend:

1) Green Lever

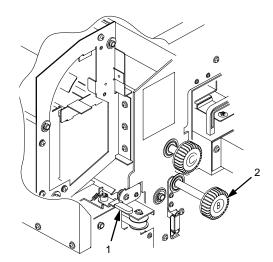
Remove knob A from its place as shown below. Attach knob A
to the paper feed shaft, and turn knob A counterclockwise. This
causes the jammed paper to be moved to the eject side.
Remove any jammed paper, and return knob A to its original
position.



- 1) Original Position of Knob A
- 2) Knob A
- 6. Restore the transport unit and the waste toner recovery unit to their original positions, and close the front cover.

## **Paper Jam In The Transport Output Section**

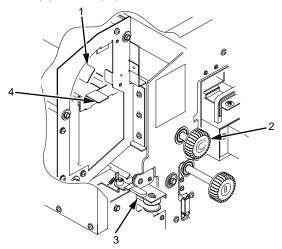
- 1. When paper motion stops, wait 15 seconds, then open the front cover.
- Pull up the bottom lever to raise the paper guide, and turn the green knob B counterclockwise. This causes the jammed paper to be moved to the paper feed section. Remove any jammed paper.



- 1) Bottom Lever (#1)
- 2) Knob B
- 3. Lower the paper guide by restoring the bottom lever to its original position. Close the front cover.

# Paper Jam In The Face Up Or Down Paper Path

- 1. When paper motion stops, wait 15 seconds, then open the front cover.
- 2. Push the top and middle levers down. Pull the bottom lever up to raise the paper guide. Turn the green knob C clockwise, and remove any jammed paper.



#### Legend:

- 1) Top Lever (#3)
- 2) Knob C
- 3) Bottom Lever (#1)
- 4) Middle Lever (#2)
- 3. Restore the top, middle, and bottom levers to their original positions, and close the front cover.

# **System Status and Error Messages**

When an error occurs, the printer displays an appropriate message on the control panel LCD. Some errors are operator-correctable, some require field service, and others require reprinting.

Operator-correctable errors include paper jams, missing consumables, and power paper stacker problems. After correcting the error condition, press CLEAR to remove the message from the display and place the printer offline. If any data resides in the print buffer, it will then be printed. Press ONLINE to place the printer online.

The "stacker" errors can usually be cleared by pressing CLEAR. In some cases, you may need to lower and then raise the stacker tray, then press CLEAR to correct the error.

Errors requiring field service are printer failures that require the attention of service personnel. Before calling your service representative, press CLEAR to attempt to remove the message from the display. If the message disappears, the original message may have been a false error indication. If the message reappears, call for service.

*Errors requiring reprinting* are those errors which require reprinting to recover from an error condition. These are discussed in detail in the following topics.

#### **IMPORTANT**

The stacker is reset automatically whenever you clear a paper fault (paper jam or fanfold paper empty) error.

# **Reprinting Pages After Fault Condition**

The printer handles errors in three ways, depending on your configuration of the Reprint on Fault option in the Paper Control menu.

If Reprint on Fault is *enabled* (the default):

Any pages left in the printer at the time of failure will be reprinted. No data is lost.

Fanfold paper: the printer reprints all pages that have not completely exited the printer at the time of failure. The exact number of pages that are reprinted is determined by the length of the page and where within the page the fault occurred.

Cut sheet paper: the printer determines how many pages did not exit the printer, and reprints all pages that did not exit.

If Reprint on Fault is disabled:

Any pages left in the printer at the time of failure will not be reprinted. Data is lost (you will need to reprint the lost pages according to your application software.)

If Reprint on Fault is confirm:

The control panel on the printer returns a message asking whether or not to reprint. Answer Yes to reprint, answer No if a reprint is not necessary.

Whether Reprint on Fault is enabled, or disabled, or confirm:

After a paper jam, you may need to reload the paper onto the tractors.

"Error Messages," on page 152, designates those errors that require reprinting to recover from an error condition.

**NOTE:** Some errors require reprinting, regardless of your printer configuration.

#### Procedure For Fault Clearing - Reprint On Fault Disabled

- 1. A fault occurs.
- 2. Correct the fault condition.
- 3. Press CLEAR.
- 4. The STAND BY LED blinks and the following message appears while the printer attempts to clear the fault:

Standby ... Clearing Fault

If the fault is not cleared:

#### **System Status and Error Messages**

 The printer beeps and briefly displays the following message:

Faults Not Cleared

- b. The printer then redisplays the original fault message, or any other uncleared fault message.
- c. Attempt to clear the fault condition again, or contact your service representative.
- If the fault is cleared, and if you do not need to reload the paper into the tractors (for example, the printer ran out of toner):
  - a. The printer goes OFFLINE.
  - b. Press ONLINE to resume printing.
- If the fault is cleared, and if you need to reload paper into the tractors (such as after a paper jam), the following message appears:

Reload Paper in Tractors

- a. Reload the paper onto the tractors.
- b. Press CLEAR.
- c. Press ONLINE to resume printing. *Note that pages have been lost.*
- If the fault is cleared, and if you already have reloaded the paper while clearing the fault condition (in Step 2), the following message appears:

Not Reprinting Failed Pages

5. Press ONLINE to resume printing. Note that pages have been lost.

#### **IMPORTANT**

If Reprint on Fault is disabled and an error occurs, and if either the "Reload Paper in Tractors" or "Not Reprinting Failed Pages" message appears, then any pages removed from the printer will not be reprinted, and the data on them will be lost.

#### Procedure For Fault Clearing - Reprint On Fault Enabled

- 1. A fault occurs.
- 2. Correct the fault condition.
- 3. Press CLEAR.
- 4. The STAND BY LED blinks and the following message appears while the printer attempts to clear fault:

Standby ... Clearing Fault

- If the fault is not cleared:
  - a. The printer beeps and briefly displays the following message:

Faults Not Cleared

- b. The printer then redisplays the original fault message, or any other uncleared fault message.
- c. Attempt to clear the fault condition again, or contact your service representative.
- If the fault is cleared, and if you do *not* need to reload the paper into the tractors (for example, the printer ran out of toner):
  - a. The printer goes OFFLINE.
  - b. Press ONLINE to resume printing.

#### Chapter 5

#### **System Status and Error Messages**

 If the fault is cleared, and if you need to reload paper into the tractors (such as after a paper jam), the following message appears:

Clear Paper Path for Reprint

- a. Reload the paper onto the tractors.
- Press CLEAR. The printer reprints only the pages affected by the fault (even though the message display reads "OFFLINE").
- c. Press ONLINE to resume printing.
- If the fault is cleared, and if you already have reloaded the paper while clearing the fault condition (in Step 2), the following message appears:

Reprinting Failed Pages

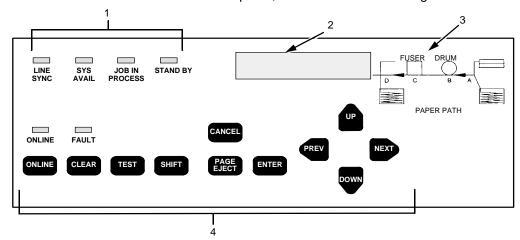
- a. The printer reprints only the pages affected by the fault.
- b. Press ONLINE to resume printing.

# **Error Messages**

"Error Messages," on page 152, lists errors by error code and shows which are operator-correctable, which require field service, and which require reprinting.

- Operator-correctable errors include paper jams, missing consumables, and power paper stacker problems.
- Errors requiring field service are printer failures that require the attention of service personnel.
- *Errors requiring reprinting* are those errors which require reprinting to recover from an error condition.

**NOTE:** The letter designations (A-D) following the "PAPER JAM" error messages match the sensor positions indicated on the control panel, as shown in the following illustration.



#### Legend:

- 1) Status Indicators
- 2) Liquid Crystal Display (LCD)
- 3) Sensor Positions A D
- 4) Function Keys

Table 1. Error Messages.

| Error<br>Code | Error Message             | Operator<br>Correctable | Field<br>Service<br>Required | Reprint<br>Required |
|---------------|---------------------------|-------------------------|------------------------------|---------------------|
| 01            | FRONT COVER<br>OPEN       | <b>✓</b>                |                              | See Note 3 and 6    |
| 08            | CUT-SHEET<br>PATH OPEN    |                         |                              |                     |
| 6C            | CUT-SHEET<br>COVER OPEN   |                         |                              |                     |
| 02            | FANFOLD PAPER EMPTY       | ✓                       |                              | See Note 4          |
| 66            | NO PAPER TRAY             | ✓                       |                              | ✓                   |
| 6F            | CUT SHEET<br>PAPER EMPTY  | <b>√</b>                |                              | ✓                   |
| 03            | PAPER JAM AT FUSER (C)    | ✓                       |                              | ✓                   |
| 04            | PAPER JAM AT EXIT (D)     | ✓                       |                              | ✓                   |
| 05            | PAPER JAM AT EXIT (D)     | ✓                       |                              | ✓                   |
| 0E            | PAPER JAM AT EXIT (D)     | ✓                       |                              | ✓                   |
| 0F            | PAPER JAM AT EXIT (D)     | ✓                       |                              | ✓                   |
| 10            | PAPER JAM AT EXIT (D)     | ✓                       |                              | ✓                   |
| 11            | PAPER JAM AT DRUM (B)     | ✓                       |                              | ✓                   |
| 12            | PAPER JAM AT FUSER (C)    | ✓                       |                              | ✓                   |
| 13            | PAPER JAM AT EXIT (D)     | ✓                       |                              | ✓                   |
| 16            | PAPER JAM AT ENTRANCE (A) | ✓                       |                              | ✓                   |
| 1B            | PAPER JAM AT ENTRANCE (A) | ✓                       |                              | ✓                   |
| 64            | PAPER JAM AT ENTRANCE (A) | ✓                       |                              | ✓                   |
| 65            | CUT SHEET<br>PICK MISS    |                         | ✓                            | ✓                   |
| 67            | PAPER JAM AT ENTRANCE (A) | ✓                       |                              | ✓                   |

| Error<br>Code | Error Message              | Operator<br>Correctable | Field<br>Service<br>Required | Reprint<br>Required |
|---------------|----------------------------|-------------------------|------------------------------|---------------------|
| 68            | PAPER JAM AT ENTRANCE (A)  | ✓                       |                              | ✓                   |
| 69            | PAPER JAM AT ENTRANCE (A)  | ✓                       |                              | ✓                   |
| 6A            | PAPER JAM AT ENTRANCE (A)  | ✓                       |                              | ✓                   |
| 6B            | PAPER JAM AT ENTRANCE (A)  | ✓                       |                              | ✓                   |
| 73            | PAPER JAM AT ENTRANCE (A)  | ✓                       |                              | ✓                   |
| 09            | TRANSPORT MOTOR FAIL       |                         | ✓                            | ✓                   |
| 14            | TRACTOR MTR FWD SPEED ERR  |                         | ✓                            | <b>√</b>            |
| 15            | TRACTOR MTR BKWD SPEED ERR |                         | ✓                            | <b>√</b>            |
| 0A            | CUTTER FAIL                |                         | ✓                            |                     |
| 0B            | CUTTER FAIL                |                         | ✓                            |                     |
| 18            | DRUM MOTOR FAIL            |                         | ✓                            |                     |
| 19            | SURFACE VOLTAGE TOO HIGH   |                         | ✓                            |                     |
| 1A            | SURFACE VOLTAGE TOO HIGH   |                         | ✓                            |                     |
| 1D            | SURFACE VOLTAGE FAIL       |                         | ✓                            |                     |
| 18            | DRUM MOTOR FAIL            |                         |                              |                     |
| 1E            | FUSER SUPPLY FAIL          |                         | ✓                            |                     |
| 1F            | FUSER FAILURE              |                         | ✓                            |                     |
| 20            | FUSER LAMP OVERHEAT        |                         | ✓                            |                     |
| 21            | FUSER FAN FAIL             |                         | ✓                            |                     |
| 22            | EXHAUST FAN FAIL           |                         |                              |                     |
| 26            | NO CLEANING UNIT           | ✓                       |                              |                     |
| 27            | NO DEVELOPER UNIT          |                         |                              |                     |
| 28            | WASTE TONER FULL           | ✓                       |                              |                     |

# Chapter 5

#### **System Status and Error Messages**

| Error<br>Code | Error Message          | Operator<br>Correctable | Field<br>Service<br>Required | Reprint<br>Required |
|---------------|------------------------|-------------------------|------------------------------|---------------------|
| 29            | NO WASTE TONER BOX     | ✓                       |                              |                     |
| 2A            | TONER LOW              | See Note 5              |                              |                     |
| 2B            | TONER DENSITY TOO HIGH |                         | ✓                            |                     |
| 2C            | TONER DENSITY TOO LOW  |                         | ✓                            |                     |
| 2D            | TONER EMPTY            | ✓                       |                              |                     |
| 2E            | DEVELOPER MOTOR FAIL   |                         |                              |                     |
| 32            | LED HEAD OVERHEAT      |                         | ✓                            |                     |
| 36            | LED FAIL               |                         | ✓                            |                     |
| 37            | LED FAIL               |                         | ✓                            |                     |
| 38            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 39            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 3A            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 3B            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 3C            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 3D            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 3E            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 3F            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 40            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 41            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 42            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 43            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 44            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 45            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 46            | ENGINE CPU FAIL        |                         | ✓                            |                     |

| Error<br>Code | Error Message          | Operator<br>Correctable | Field<br>Service<br>Required | Reprint<br>Required |
|---------------|------------------------|-------------------------|------------------------------|---------------------|
| 47            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 72            | ENGINE CPU FAIL        |                         | ✓                            |                     |
| 48            | CONTROLLER COMM. FAIL  |                         | ✓                            |                     |
| 49            | CONTROLLER COMM. FAIL  |                         | ✓                            |                     |
| 4A            | CONTROLLER COMM. FAIL  |                         | ✓                            |                     |
| 4B            | CONTROLLER COMM. FAIL  |                         | ✓                            |                     |
| 4C            | CONTROLLER COMM. FAIL  |                         | ✓                            |                     |
| 4D            | CONTROLLER COMM. FAIL  |                         | ✓                            |                     |
| 4E            | CONTROLLER COMM. FAIL  |                         |                              |                     |
| 50            | STACKER FAIL           |                         | ✓                            |                     |
| 51            | STACKER FAIL           |                         | ✓                            |                     |
| 52            | STACKER FAIL           |                         | ✓                            |                     |
| 53            | STACKER FAIL           |                         | ✓                            |                     |
| 54            | STACKER INTERLOCK FAIL |                         | ✓                            |                     |
| 55            | STACKER FAIL           |                         | ✓                            |                     |
| 57            | STACKER NOT READY      | ✓                       |                              |                     |
| 58            | STACKER NOT READY      | ✓                       |                              | ✓                   |
| 5A            | STACKER FAIL           |                         | ✓                            |                     |
| 5B            | STACKER FAIL           |                         | ✓                            |                     |
| 5C            | STACKER NOT READY      | ✓                       |                              | ✓                   |
| 56            | STACKER FULL           |                         |                              |                     |
| 06            | NO TRANSFER UNIT       |                         | ✓                            | ✓                   |
| 0C            | TRANSFER PLATFORM FAIL |                         | ✓                            | ✓                   |
| 0D            | TRANSFER PLATFORM FAIL |                         | ✓                            | ✓                   |

# Chapter 5

#### System Status and Error Messages

| Error<br>Code | Error Message                       | Operator<br>Correctable | Field<br>Service<br>Required | Reprint<br>Required |
|---------------|-------------------------------------|-------------------------|------------------------------|---------------------|
| 07            | SCUFF LEVER OPEN                    | ✓                       |                              |                     |
| 78            | MAIN CHARGER ERROR                  |                         | ✓                            | ✓                   |
| 79            | TRANSFER CHARGER ERROR              |                         | ✓                            | ✓                   |
| 7A            | PRE-CHARGER ERROR                   |                         | ✓                            | ✓                   |
| 7B            | CLEANING BIAS ERROR                 |                         | ✓                            | ✓                   |
| 7C            | DEVELOPING BIAS ERROR               |                         | ✓                            | ✓                   |
| 7D            | SEPARATOR CHARGER<br>ERROR          |                         | ✓                            | ✓                   |
|               | TRAY MISMATCH                       | ✓                       |                              |                     |
| 5D            | STACKER FAIL                        |                         | ✓                            |                     |
| 5E            | STACKER FAIL                        |                         | ✓                            |                     |
| 5F            | STACKER FAIL                        |                         | ✓                            |                     |
|               | FILE SYS FULL<br>DELETE FILES       | <b>√</b>                |                              | ✓                   |
|               | FILE SYS FULL<br>OPTIMIZE&REBOOT    | <b>✓</b>                |                              | ✓                   |
|               | FILE SYS FULL<br>ADD FLASH          | <b>√</b>                |                              | ✓                   |
|               | INSUFFICIENT RAM<br>REBOOT/ADD RAM  | <b>✓</b>                |                              | ✓                   |
|               | FILE EXISTS<br>ENABLE OVERWRITE     | <b>✓</b>                |                              | ✓                   |
|               | FILE SYS INVALID<br>OPTIMIZE&REBOOT | <b>✓</b>                |                              | ✓                   |
|               | FILE SYS WRITE<br>CHECK FLASH       | <b>✓</b>                |                              | ✓                   |

| Error<br>Code | Error Message                   | Operator<br>Correctable | Field<br>Service<br>Required | Reprint<br>Required |
|---------------|---------------------------------|-------------------------|------------------------------|---------------------|
|               | RELOAD PAPER<br>PIN TRACTORS    | <b>√</b>                |                              | ✓                   |
|               | CLEAR PAPER PATH<br>FOR REPRINT | <b>√</b>                |                              | ✓                   |
|               | FRAMING ERROR                   |                         | ✓                            | ✓                   |
|               | PARITY ERROR                    |                         | ✓                            | ✓                   |
|               | BUFFER OVERRUN                  |                         | ✓                            | ✓                   |
|               | BUFFER OVERFLOW                 |                         | ✓                            | ✓                   |

#### **TABLE NOTES:**

- For any error with Reprint on Fault enabled: If the printer stops while in the middle of printing a page, reloading the paper and reprinting are required. There may be other cases requiring reloading and reprinting; if so, a message will appear.
- 2. For *any* error with Reprint on Fault disabled: If the printer stops while in the middle of printing a page, reloading the paper is required and pages are lost.
- 3. For error numbers 01, 14, and 15: If the error occurs while paper is *not* moving, it is not necessary to reload or reprint.
- 4. For error number 02: If the error is caused by a paper-empty at the lower sensor (Paper Near End Sensor), it is not necessary to reprint.
- 5. Status message only. No operator action required to clear message.

The Front Cover Open error can occur when either the Upper Doors or the Paper Output Door (as seen on the previous page) is open. If the Upper Doors are closed, push the Paper Output Door in to release it to its down position.

# Chapter 5

**System Status and Error Messages** 



# Maintenance Log Sheets

# **Maintenance Log Sheets**

The maintenance log sheets are for your use. These may be photocopied and kept in a binder near the printer. Be sure to use them each time either you or your service provider perform printer maintenance.

Only maintenance levels A through C are presented in this Operator's Guide. These three levels are done by the user. Levels D through H are done by a service representative and are included in the User's Manual.

## Level A Maintenance - 15,000 Pages (User)

| Action                | Item             | Part #     | Performed<br>By | Date |
|-----------------------|------------------|------------|-----------------|------|
| Clean                 | General cleaning | N/A        |                 |      |
| Clean                 | Main charger     | 705741-001 |                 |      |
| Clean                 | Precharger       | 705742-001 |                 |      |
| Clean                 | Transfer charger | 705743-001 |                 |      |
| Clean<br>See Note 1   | Cover glass      | N/A        |                 |      |
| Replace<br>See Note 2 | Toner cartridge  | 703532-050 |                 |      |

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%)

#### Level B Maintenance - 150,000 Pages (User)

| Action                | Item                | Part #     | Performed<br>By | Date |
|-----------------------|---------------------|------------|-----------------|------|
| Clean                 | General cleaning    | N/A        |                 |      |
| Clean                 | Main charger        | 705741-001 |                 |      |
| Clean                 | Precharger          | 705742-001 |                 |      |
| Clean                 | Transfer charger    | 705743-001 |                 |      |
| Clean<br>See Note 1   | Cover glass         | N/A        |                 |      |
| Clean                 | SELFOC lens         | N/A        |                 |      |
| Vacuum                | Lamp housing filter | 202985-001 |                 |      |
| Vacuum                | Cleaning unit       | 705740-001 |                 |      |
| See Note 2            | Photoreceptor drum  | 703535-001 |                 |      |
| Replace<br>See Note 3 | Toner cartridge     | 703532-001 |                 |      |
| Replace               | Developer           | 703548-001 |                 |      |
| Replace<br>See Note 4 | Waste toner bottle  | 202984-001 |                 |      |

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%).

Note 4: The waste toner bottle is replaced every 90,000 pages, so may not need to

be replaced at this time.

#### Level C Maintenance - 600,000 Pages (User)

| Action                | Item                      | Part #     | Performed<br>By | Date |
|-----------------------|---------------------------|------------|-----------------|------|
| Clean                 | General cleaning          | N/A        |                 |      |
| Clean<br>See Note 1   | Cover glass               | N/A        |                 |      |
| Clean                 | SELFOC lens               | N/A        |                 |      |
| Clean                 | Flash power supply filter | N/A        |                 |      |
| See Note 2            | Photoreceptor drum        | 703535-001 |                 |      |
| Replace               | Developing Unit           | 705739-001 |                 |      |
| Replace<br>See Note 3 | Toner cartridge           | 703532-001 |                 |      |
| Replace               | Waste toner bottle        | 202984-001 |                 |      |

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: The Toner cartridge should be replaced about every 10,000 pages or as needed (for page coverage of 4%).

# **Specifications**

# **Paper Specifications**

Paper type Fanfold

Paper size

Width 7 to 16 inches

Length\* 1 to 30 inches, in

multiples of 1/6 inch.

\* Measured from main folding/cutting perforation to main folding/cutting perforation.

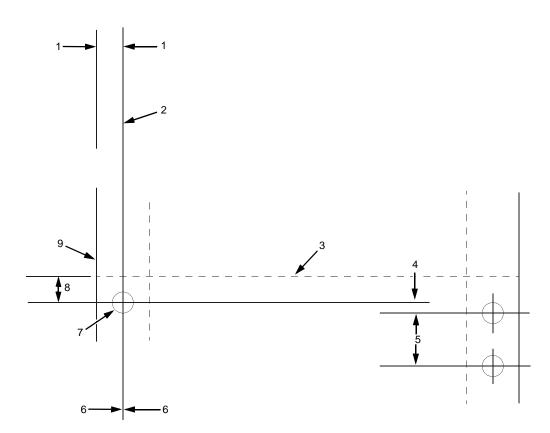
Tractor pin holes See the table and figure

below.

## Appendix B

#### **Paper Specifications**

| Specification  | Inch                      | Millimeter                | Dimension<br>in Figure |
|--|---------------------------|---------------------------|------------------------|
| Pin hole center to folding perforation   | 1/6, 1/4, 1/<br>3, or 1/2 | 4.23, 6.35,<br>8.47, 1.20 | 8                      |
| Hole center line to edge of form   | 0.236<br>± 0.028          | 6.0 ±0.1                  | 1                      |
| Hole diameter  | 0.156<br>± 0.004          | 4.0 ±0.1                  | N/A                    |
| Distance between centers of two consecutive holes  | 0.500<br>± 0.002          | 12.7 ±0.05                | 5                      |
| Max. deviation of holes from their center line   | 0.004                     | 0.1                       | 6                      |
| Max. deviation Left Hand<br>hole to companion Right<br>Hand hole (Center Line<br>to Center Line) | 0.006                     | 0.15                      | 4                      |
| Max. parallel deviation<br>Left Hand hole Center<br>Line to Right Hand hole<br>Center Line       | 0.006                     | 0.15                      | N/A                    |



#### Legend:

- Hole centerline to edge of form
  Center Line
  Main Folding/Cutting Perforation
  Centerline to Centerline
  Distance between centers of two consecutive holes

- 1) 2) 3) 4) 5) 6) 7) 8) 9) Center Line Deviation
  Tractor Pin Hole
  Pin hole to perforation
  Fanfold Paper

#### **Appendix B** Performance Characteristics

Paper thickness .010 inch maximum

Paper weight 18 to 44 lb. bond (68-165g/m<sup>2</sup>), 44-125

lb. tag/label (75-204g/m<sup>2</sup>)

Paper feed Automatic paper parking mechanism

incorporated

Maximum paper stack size 3000 sheets (18 lb.)

Folder Perforation

Cut 0.12 inches or 3mm minimum

Cut to Tie 3:1 minimum

# **Performance Characteristics**

Printing density 300 x 300 dpi

400 x 400 dpi or 240 x 240 dpi

(options)

Printing speed 2.78 inches per second.

| Paper Size | Orientation | Printing Speeds    |
|------------|-------------|--------------------|
|            |             | (Pages per Minute) |
| A4         | Landscape   | 20                 |
| Letter     | Landscape   | 20                 |
| A4         | Portrait    | 15                 |
| Letter     | Portrait    | 15                 |

Maximum effective print

width

14.7 inches

#### **Host Interfaces**

Duty cycle 200,000 total pages/month

of fanfold paper (11-in.

length)

Mechanical life 5 years or 12,000,000

pages (11-inch length)

Warm-up time 60 sec. max.

First page printing time 25 sec. max.

MTBF/MPBF 8,000 hours/2,880,000

pages (letter size) 25% print to power on ratio

MTTR 2 hour max. (unit

exchange

#### **Host Interfaces**

Standard Centronics parallel,

Dataproducts parallel, serial

RS-232/422

**NOTE:** Dataproducts parallel interface requires an adapter cable.

Optional Coax/Twinax

Ethernet network adaptor

#### Appendix B

#### **Memory Requirements**

#### **Emulations**

Standard LinePrinter Plus

Optional PCL5/LP+

PCL5/PGL PCL5/VGL IGP/VGL IGP/PGL IPDS

CTHI (if installed)

# **Memory Requirements**

The L5000 series printers have 32 MB (standard) or 64 MB (optional) of RAM (Random Access Memory), and 8 MB (standard) or 16, 32, or 64 (optional) of Flash Memory. This is standard with all new printer shipments, and all upgraded printers.

# **Safety Regulations**

UL 1950 CSA 950

EUROPE EN 60950

# **Electromagnetic Interference**

FCC Class A

Europe EN55022 Class A

# **Physical Characteristics and Environment**

Dimensions (H x W x D) 49 inch H x 30 inch W x 34

inch D

In crate:

36 inches H x 58 inches W

x 61 inches D

Weight 353 lbs. (or 441 lbs.) with

options

Input voltage range 200 - 240 V <u>+</u>10%

50/60 Hz (47 - 62 Hz)

single phase

Power consumption 3300 W (operating);

wall outlet must be on a 30-

amp breaker.

Environment

Temperature Operating: 50° to 80° F

(10° to 27° C)

Non-operating: 14° to 95° F(-10° to 35° C)

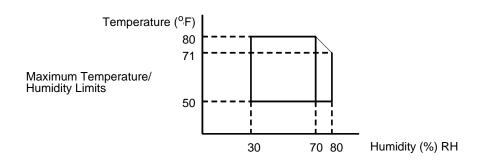
Humidity Operating: 30 to 80% RH

Non-operating: 10 to 80%

RH

(non-condensing)

#### Appendix B **Physical Characteristics and Environment**



Sound level

60 db (A-weighted ) max. Full options Operating

Standby state 50 dB (A-weighted)

Inclination 1° max.

| Α  | CLEAR   |
|--|---|
| AUTO function key, 41  | function key, 48 Clearing faults procedure with Reprint on Fault disabled, 147 with Reprint on Fault enabled, 149   |
| Buttons See Function keys, 45  | Clearing service level messages, 80 Control panel using, 45   |
| CANCEL   | Cover glass   |
| function key, 49   | fuser unit cleaning, 110  |
| Cassette   | Custom tray width, 36   |
| paper jams at back of, 138   | Cut sheet paper   |
| Cassette paper size  | loading, 31   |
| changing, 34   | Cut sheet paper jams, 138   |
| Caution notice, 17   | Cut sheet tray linking, 35  |
| Changing cassette paper size, 34   | D   |
| Charger main cleaning, 104 Cleaning cleaning unit, 121 discharge LED, 123 fuser unit cover glass, 110 general, 95 main charger, 104 photoreceptor drum, 124 pickup rollers, 115 reverse rollers, 118 | Danger notice, 17 Developer replacing, 69 Developing unit replacing, 73 Developing unit recharging See Developer, replacing, 69 Developing unit replacing, 69 Diagnostics printer, 129 printer offline, 129 |
| Cleaning unit  | Diagnostics printer online, 130   |
| cleaning 121   | orinine, 150  |

| Diagrams                            | F                                   |
|-------------------------------------|-------------------------------------|
| paper path, 45                      | _                                   |
| Discharge LED                       | Face up or down paper path          |
| cleaning, 123                       | paper jams in, 145                  |
| Disk drives                         | Fanfold paper                       |
| location, 38                        | loading, 28                         |
| Disposal                            | Fanfold paper jams, 130             |
| photoreceptor drum, 68              | FAULT                               |
| DOWN                                | status lamp, 46                     |
| function key, 41, 50                | Fault clearing procedure            |
| Drum                                | with Reprint on Fault disabled, 147 |
| photoreceptor cleaning, 124         | with Reprint on Fault enabled, 149  |
| Drum photoreceptor                  | Fault condition                     |
| disposal, 68                        | reprinting pages after, 146         |
| E                                   | Fault messages table, 151           |
| _                                   | Field service                       |
| Electromagnetic interference        | errors requiring, 146               |
| specifications, 168                 | Fonts, 26                           |
| Emulation specifications, 168       | Forms, 26                           |
| Emulations, 25                      | Front panel See Control panel, 45   |
| ENTER                               | Function keys                       |
| function key, 49                    | AUTO, 41                            |
| Environmental specifications, 169   | CANCEL, 49                          |
| Error messages, 146                 | CLEAR, 48                           |
| TRAY MISMATCH error, 36             | DOWN, 41, 50                        |
| Error messages table, 151           | ENTER, 49                           |
| Errors                              | HEAVY, 41                           |
| operator-correctable, 146           | NEXT, 50                            |
| requiring field service, 146        | ONLINE, 47                          |
| requiring reprinting, 146           | PAGE EJECT, 48                      |
| Errors requiring field service, 146 | PREV, 50                            |
| Errors requiring reprinting, 146    | SHIFT, 48                           |
|                                     | STOP, 41                            |

| TEST, 48  | K  |
|---|--|
| UP, 50 Fuser unit cover glass cleaning, 110 <b>G</b>  | Keys function, 45 Keys See Function keys, 45   |
| Glass cover fuser unit cleaning, 110  H  HEAVY function key, 41  Host interface specifications, 167   | LCD See Liquid crystal display, 45 LED discharge cleaning, 123 LINE SYNC status lamp, 45 LinePrinter Plus emulation, 25  |
| IGP / PGL Emulation, 25 IGP / VGL Emulation, 25 Impact Printer Emulation, 25 Important notice, 17 Intervals replacement service provider responsibility, 92   | Linking Cut sheet tray, 35 Liquid crystal display (LCD), 45 Loading cut sheet paper, 31 Loading fanfold paper, 28 Loading paper, 28 Location disk drives, 38 power switch, 38      |
| Jams  paper at back of paper cassette, 138 paper cut sheet, 138 paper fanfold, 130 paper in face up or down paper path, 145 paper in transport output section, 144 paper near paper output section, 132 paper near tractor, 130  JOB IN PROCESS status lamp, 46 | Log sheets maintenance level E, 86 level F, 87 level G, 88 level H, 89 maintenance level A, 82 maintenance level B, 83 maintenance level C, 84 Log sheets maintenance level A, 160 |

| M  | Output section                     |
|--|------------------------------------|
|  | transport paper jams in, 144       |
| Main charger                             | Р                                  |
| cleaning, 104                            |                                    |
| Maintaining print quality, 77            | Page counts                        |
| Maintenance log sheets                   | service level, 79                  |
| level A, 82, 160                         | PAGE EJECT                         |
| level B, 83                              | function key, 48                   |
| level C, 84                              | Page length                        |
| level E, 86                              | stacker setting, 42                |
| Maintenance schedules, 81                | Pages                              |
| Manual conventions, 18                   | reprinting after fault, 146        |
| Memory requirements, 168                 | Paper                              |
| Message display See Liquid crystal       | loading, 28                        |
| display, 45                              | cut sheet, 31                      |
| Message table                            | fanfold, 28                        |
| error messages, 151                      | Paper cassette                     |
| Messages                                 | paper jams at back of, 138         |
| error, 146                               | Paper jams                         |
| service level clearing, 80               | at back of paper cassette, 138     |
| system status, 146                       | cut sheet, 138                     |
| N  | fanfold, 130                       |
|  | in face up or down paper path, 145 |
| NEXT                                     | in transport output section, 144   |
| function key, 50                         | near paper output section, 132     |
| O  | near tractor, 130                  |
| ONLINE                                   | Paper output section               |
| function key, 47                         | paper jams near, 132               |
| status lamp, 46                          | Paper path                         |
| Operator-correctable errors, 146         | face up or down                    |
| Operator's panel See Control panel, 45   | paper jams in, 145                 |
| operator o parior oco control pariol, 40 | Paper path diagram, 45             |

| Paper size   | emulations, 100  |
|--|--|
| cassette changing, 34  | environment, 169   |
| Paper specifications, 163  | host interfaces, 167   |
| Paper stacker  | memory requirements, 168   |
| power, 39  | paper, 163   |
| PCL5 Emulation, 25   | performance, 166   |
| Performance specifications, 166  | physical, 169  |
| PhoenixPage PCL5 Emulation, 25   | safety regulations, 169  |
| Photoreceptor drum   | Printronix LinePrinter Plus emulation, 25  |
| cleaning, 124  | Q  |
| disposal, 68   | <b>.</b>   |
| Physical characteristics, 169  | Quality print  |
| Pickup rollers   | maintaining, 77  |
| cleaning, 115  | problems with, 77  |
| Power paper stacker, 39  | R  |
| Power switch location, 38  Power-on self test, 129  PREV function key, 50  Print quality maintaining, 77 problems, 77  Print quality problems, 77  Printer | Recharging developing unit See Replacing, developer, 69 Recommended vacuum cleaners, 78 Replacement intervals service provider responsibility, 92 Replacement schedule service provider responsibility, 92 Replacing developing unit, 69, 73 Replacing developer, 69 |
| emulations, 25 general information, 25 Printer diagnostics, 129 offline, 129 online, 130 Printer specifications electromagnetic interference, 168          | Reprint on Fault enabled fault clearing procedure, 149 Reprint on Fault disabled fault clearing procedure, 147 Reprinting errors requiring, 146 Reprinting pages after fault, 146  |

| Reverse rollers                     | Stacker full                   |
|-------------------------------------|--------------------------------|
| cleaning, 118                       | operator procedure, 44         |
| Rollers                             | Stacker page length            |
| pickup cleaning, 115                | setting, 42                    |
| reverse cleaning, 118               | STAND BY                       |
| S                                   | status lamp, 46                |
|                                     | Status lamps, 45               |
| Safety                              | FAULT, 46                      |
| notices, 17                         | JOB IN PROCESS, 46             |
| Safety regulations, 169             | LINE SYNC, 45                  |
| Schedule replacement                | ONLINE, 46                     |
| service provider responsibility, 92 | STAND BY, 46                   |
| Schedules                           | SYS AVAIL, 46                  |
| maintenance, 81                     | STOP                           |
| Self test                           | function key, 41               |
| power-on, 129                       | Switches See Function keys, 45 |
| Service levels                      | SYS AVAIL                      |
| messages clearing, 80               | status lamp, 46                |
| Setting cassette paper size, 34     | System status messages, 146    |
| SHIFT                               | Т                              |
| function key, 48                    |                                |
| Specifications printer              | TEST                           |
| electromagnetic interference, 168   | function key, 48               |
| emulations, 168                     | Test self                      |
| environment, 169                    | power-on, 129                  |
| host interfaces, 167                | Tractor                        |
| memory requirements, 168            | paper jams near, 130           |
| paper, 163                          | Transport output section       |
| performance, 166                    | paper jams in, 144             |
| physical, 169                       | Tray linking                   |
| safety regulations, 169             | cut sheet, 35                  |
| Stacker                             | TRAY MISMATCH error, 36        |
| power paper, 39                     |                                |

Tray width custom, 36

U

UP

function key, 50

V

Vacuum cleaners recommended, 78

| h | n  | A | ^ | v |
|---|----|---|---|---|
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#### PRINTRONIX, INC.

14600 Myford Road P.O. Box 19559 Irvine, CA 92623-9559 Phone: (714) 368-2300

Fax: (714) 368-2600

Technical Support: (714) 368-2686

#### **PRINTRONIX**

Nederland BV P.O. Box 163, Nieuweweg 283 NL-6600 AD Wijchen The Netherlands

Phone: (31) 24 6489489 Fax: (31) 24 6489499

#### **PRINTRONIX Schweiz GmbH**

42 Changi South Street 1 Changi South Industrial Estate Singapore 486763 Phone: (65) 542-0110 Fax (65) 543-0220

Visit our website at: www.printronix.com

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